



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

### Usage guidelines

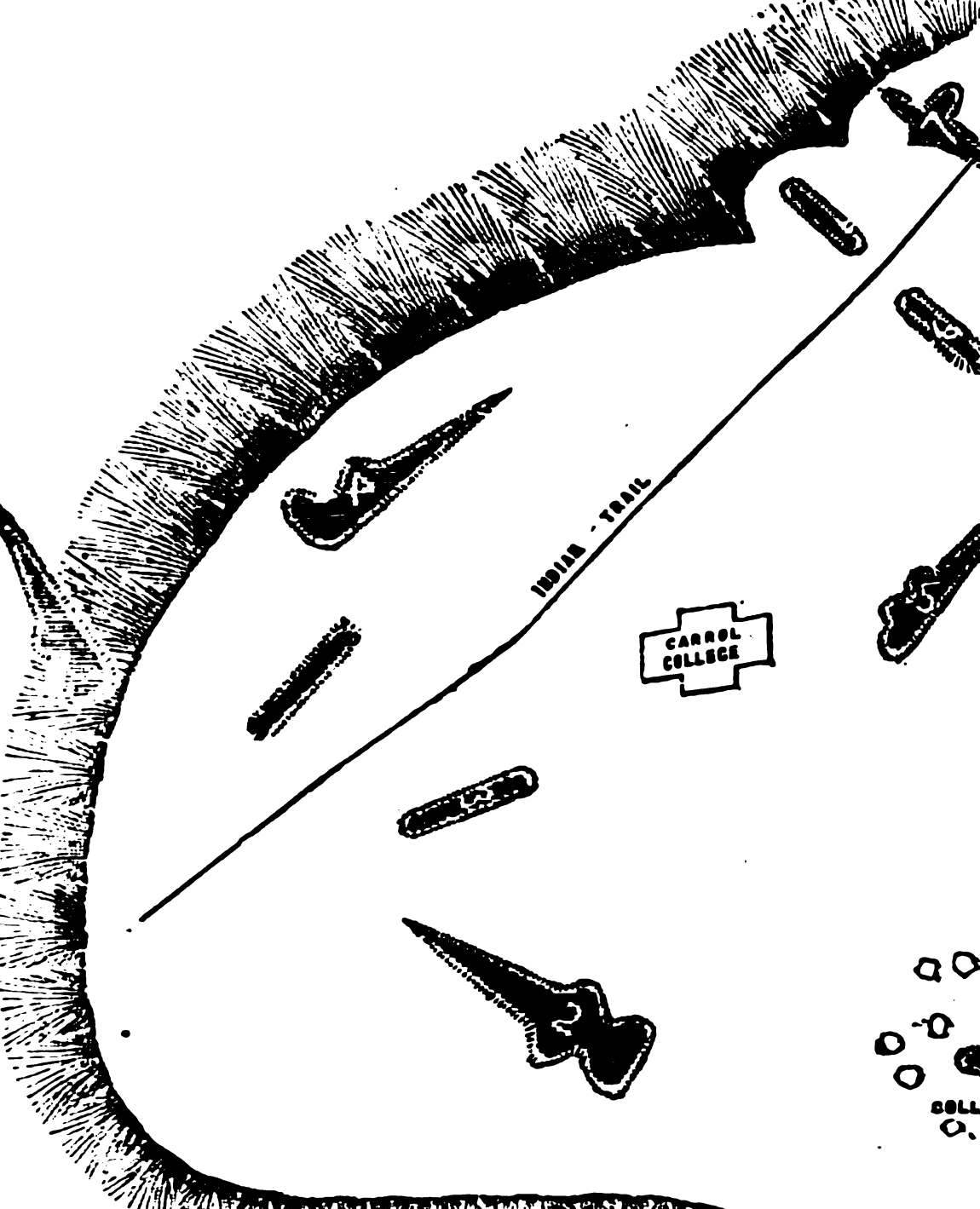
Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

### About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>



*The American antiquarian  
and oriental journal*

Stephen Denison Peet













*4*

THE

AMERICAN ANTIQUARIAN

AND

ORIENTAL JOURNAL.

---

VOLUME IX.—JANUARY-NOVEMBER, 1887.

---

EDITED BY STEPHEN D. PEET.

---

CHICAGO, ILL.:  
175 WABASH AVENUE.  
1887.

341)  
-12

L.500.120.3

# TABLE OF CONTENTS.

## CONTENTS OF VOL. IX, NO. 1.

	Page.
THE INDIANS OF PUGET SOUND—By M. Eells—First Paper - -	1
VILLAGE LIFE AND CLAN RESIDENCES AMONG THE EMBLEMATIC MOUNDS— By S. D. Peet—Illustrated—Ninth Paper - - - -	10
EVAY SHAH: A Sacrificial Stone near St. Paul—By H. C. Hovey, D. D.	15
CORRESPONDENCE—The Relics of the Iroquois, by W. M. Beauchamp; Mound Containing Wrought Iron Nail and Brass Buckle, by W. J. Chrysostom Verwyst, O. L. H.; Books on Myths and Myth- ology, by J. Owen Dorsey; Gold and Bronze Relics, by J. A. McNeil; Modern Mound Burial, by Aug. Campbell; A Frag- ment of Shawnee History, by H. S. Halbert; Mounds on the Upper Wisconsin, by A. G. Shub; Old Forts at the West, by W. A. Poole; Serpent Symbolism in Asia and America, by O. D. Miller; Conjectures about the Mound Builders, by Alex- ander Wilder; Indian Villages in Massachusetts, by Stillman B. Pratt; Quartz Implements, by N. H. Winchell; Mound Cloth, by S. H. Binkley; Elephants' Foot, by C. H. Edwards -	37
EDITORIAL—The Antiquity of Man in America - - -	49
NOTES ON AMERICAN ETHNOLOGY—By D. G. Brinton, M. D.—Pampa's Nahuatl Grammar; Leon's Tarascan Syllabario; Carl Bovallius' Nicaragua Antiquities; Wampum in Venezuela; Mexican Funeral Ceremonies; Jade in America; The Chuchona Lan- guage; The Fischer Collection; The Elephant Pipes -	53
NOTES FROM THE FAR EAST—By Prof. John Avery—The Six Syllable Prayer of the Tibetans; Sacred Trees in the East; Some An- cient Names of Ceylon; The Centenary of the Asiatic Society of Bengal - - - -	55
NOTES ON EUROPEAN ARCHEOLOGY—By Henry Phillips, Jr.—Reindeer in Italy; Burial Urns; Urn Burial Fields; A Symbol on Coins; Antiquities in Hanover - - - -	58
LITERARY NOTES—By the Editor—Stonehenge; The Grave of Cæsar Borgia; Tessellated Pavement; Duffield Castle; Gaulish Boat; A Stone Coffin; The Moabite Stone; Stone Plummets; Terra Cotta Heads; Itasca Lake; The Statue of Hermes; Archæolog- ical Collections; Lectures on Roman Archæology; Mongolian Explorer; Oriental Congress; Russian Anthropology; Muscle Reading; Geographical Names; Historical Societies; Growing Popularity of Archæology; The Village of the Mascoutens -	60
BOOK REVIEWS—History of Greek Literature; Ancient Cities; Pro- ceedings of the American Antiquarian Society - - -	65



## CONTENTS OF VOL. IX. NO. 2.

	Page.
WHO WERE THE EFFIGY BUILDERS—By S. D. Peet—Illustrated	67
THE ORPHAN MYTH—The Deghiha Language—By J. Owen Dorsey,	95
TRADITIONS AND HISTORY OF THE PUGET SOUND INDIANS—By Rev. M. Eells	97
CORRESPONDENCE—Quartz Workers of Little Falls, by T. H. Lewis; Some Aztec Questions, by Henry W. Haynes; Tribal Affinity of Shickalamy and his Son Logan, by A. D. Guss; Colonel Charles Whittlesey, a Sketch of his Life, by Judge C. C. Baldwin	105
EDITORIAL—Archæology in Ohio,	114
NOTES ON AMERICAN ETHNOLOGY—By D. G. Brinton, M. D.—The Bella Coola Indians: The Shingu Indians; Nahuatl Folk Lore Chrestomathy; The Origin of the Maya Characters; Petroglyphs in Venezuela; Ancient Inscriptions in America,	115
NOTES ON EUROPEAN ARCHÆOLOGY—Later explorations—By Henry Phillips, Jr.,	116
NOTES FROM THE FAR EAST—By Prof. John Avery,	117
LINGUISTIC NOTES—By Albert S. Gatschet—Chinook Jargon; Chuchon and Maya Languages; Chilian Language; Muller's Outline; Aryan Vocalic System; Notes Etymologiques, by V. Henry; Grøeber's Romance Philology; Phonology of Australian Lan- guages,	120
ETHNOGRAPHIC NOTES—By Albert S. Gatschet—Folk Lore of Tinne Tribes; Coahuila; Articles on America; Dr. Ten Kate's Travels; A New German-American Magazine; Ethnology in Berlin; Prehistorics of Batavia,	123
LITERARY NOTES—By the Editor—Rock Houses; Fort Ancient; An American Art Magazine; General Bradstreet's Misfortunes; Cicero in Schools; "Mene, Mene, Tekel, Upharsin;" Totems of the Shoshoni Indians; The Pentateuch—The Fragmentary Theory; School of Archæology in Palestine,	126
BOOK REVIEWS—The Old Testament Student; Andover Review; The Semitic Alphabet; The Conception of Love in Some American Languages; Rock Forming Mineral.	131

## CONTENTS OF VOL. IX, NO. 3.

	Page.
THE SERPENT SYMBOL—By Stephen D. Peet—Illustrated	133
CORRESPONDENCE—The Metals of the Aztecs, by W. W. Blake; Mode of Fishing by Delaware Indians, by A. F. Berlin; "Old Fort" in Kentucky, by T. H. Lewis; A "Silver Find," by W. K. Moor- head, illustrated; Collections of Copper Relics, by F. S. Perkins; Mounds in Polk Co., Wis., by A. H. Porter; Books on Myths and Mythology, by J. Owen Dorsey; A Ceremonial Object, by A. F. Berlin; Effigy Mounds on the Kickapoo River, by Pizarro Cook; Mounds in Madison County, Ohio.	164
EDITORIAL—Are there any Dragons in America, illustrated	179

# TABLE OF CONTENTS.

v

<b>LITERARY NOTES</b> —By the Editor—Cosmogonies in the Eastern Traditions; The Doomsday Book; The Hittites and the Canaanites; Relics in the Mounds of Ohio; Spool Ornaments; The Ohio State Arch. and Hist. Society; Articles in Magazines; Archaeological Papers	183
<b>NOTES FROM THE FAR EAST</b> —By Prof. John Avery—The Brahui Language; The Taprobanian; The Achoka Alphabet in Ceylon; The Language of the Vedas; Origin of the Gypsies	189
<b>NOTES ON EUROPEAN ARCHÆOLOGY</b> —Planet Cult—By Henry Phillips, Jr.	193
<b>BOOK REVIEWS</b> —Development of English Literature; History of the Pacific States; History of Ohio; Universalism in America; Legends of the Panjab; Studies in General History; Notes on Mexican Codices; Gen. Robert Toombs; Geography of Groton, Mass.; Antiquities of Ohio; The Aztecs, their History, Manners, Customs; two reviews	194

## CONTENTS OF VOL. IX. NO. 4.

	Page
<b>THE USE OF BEEF AND SPIRITUOUS LIQUOR IN INDIA</b> —By Wm. E. A. Axon, M. R. S. I.,	199
<b>ELEPHANTS IN AMERICA</b> —By Albert S. Gatschet,	202
<b>HERE AND THERE IN MARYLAND</b> —By W. H. Babcock,	203
<b>A PREHISTORIC AMPHITHEATRE IN FLORIDA</b> —By E. M. Hale, M. D.—Illustrated,	207
<b>THE PUGET SOUND INDIANS</b> —By Rev. M. Eells—Third Paper,	211
<b>GOLD AND SILVER ORNAMENTS FROM MOUNDS OF FLORIDA</b> —By Geo. F. Kunz—Illustrated,	219
<b>CORRESPONDENCE</b> —Mounds in Missouri, by Thomas Beckwith; Mounds in Juneau County, Wis., by A. A. Young; A bit of Local Indian History, by A. F. Berlin; The Silver Find in Kentucky, by T. H. Lewis; Village Trails and Mounds in Michigan, by H. H. Carson; Shell Ornaments, by Wm. W. Adams; Huidah Land, by James Deans,	228
<b>EDITORIAL</b> —Early Books Which Treat of Mounds; The Mastodon in America and the Mound Builders, Illustrated; Solomon's Temple and Phœnician Architecture; The Session of the A. A. A. S. in New York,	239
<b>LITERARY NOTES</b> —By the Editor—Elephant Pipes; Dialects of North Greece; Alexander the Great; The Attic Lekythoi; The Moabite Stone; Excavations at Jerusalem; The Temple of Zeus at Olympia; Ancient Inscriptions; Greek and Roman Civilization; Europe the Home of the Aryan; Recent Discoveries in Rome; Babylonian Seals; The Macleod Historical Society,	250
<b>LINGUISTIC NOTES</b> —By Albert S. Gatschet—Onondago and Delaware; The Ixil Language; Costarican Languages; The Ainu Language; "Etruria Capta,"	257

ETHNOLOGIC NOTES—By Albert S. Gatschet—Glazier as a Discoverer; Davis on Indian Games; Wooden-Plate Armors; Pinart on the Isthmus; Ornamentation of New Guinean Implements and Carvings,	258
NOTES FROM THE FAR EAST—By Prof. John Avery,	261
NOTES ON EUROPEAN ARCHÆOLOGY—By Henry Phillips, Jr.,	264
BOOK REVIEWS—Dictionaire de la Langue Nahuatl per Remi Simeon,	264

## CONTENTS OF VOL. IX, NO. 5.

	Page.
GOLD ORNAMENTS FROM U. S. OF COLOMBIA—By Geo. F. Kunz—Illus	267
THE PUGET SOUND INDIANS—Fourth Paper—By M. Fells	271
THE CREATOR IN THE RELIGIONS OF THE EAST—By Wm. Tucker, D. D.	276
SOME PROBLEMS IN CONNECTION WITH THE STONE AGE—By S. D. Peet—Illustrated	280
CORRESPONDENCE—Graves at Fort Ancient, by Warren K. Moorehead; Mounds in Manitoba, by Chas. N. Bell; Carver's Cave, by J. F. Williams; Revolutionary Relics in New York, by Dr. E. R. Freeman; Cabinet of Relics in Northwest Ohio, by Wm. Taylor; Shell Heap at Cedar Rapids, Iowa, by W. B. Evans; Relics Found in Iowa, by J. R. Nissley; Furnaces and Wells in Ross County, Ohio, by W. J. Parker; The Nationality of Logan and his Father, by W. M. Beauchamp; Stephen Brule, by J. Chrysostom Verwyst, O. L. H.; Mound in Florida, by C. M. Farber; Buffalo Tracks in Solid Rock, by G. C. Brodhead; Relics in Pennsylvania, by Theo. A. Kendall; <u>Inside View of a Huidah Dwelling</u> , by James Deans; <u>Arrows and Pendants</u> , by H. C. Stevens; The Kentucky Silver Find, by W. K. Moorehead; Welded Copper Spear, by C. F. Gunther; A Game Drive, by A. F. Berlin; Perforated Stone from Ohio, by D. W. Lawrence; Were the Mound Builders Indians? by Wm. Tucker, D. D.; Stone Pavements and Cremation Ashheaps, by S. H. Binkley	295
EDITORIAL—The Green Stone Axe; Museums in New York; Relics in the Museum of Natural History; Prof. John Avery; Dr. Chas. Rau; Memorial Notices;	317
LITERARY NOTES—By the Editor—Antiquity of Man in America; Numismatic and Antiquarian Society; Program of A. A. A. S. for 1887; Jade in British Columbia; Geology of Palestine; Rings in Ancient Times; Oriental Grammars; The Rosicrucians; Ancient Legends of Ireland; Mound Builder's Cloth; Preservation of Monuments; "Waste Land Wanderings;" Masks and their Purposes	323
NOTES ON EUROPEAN ARCHÆOLOGY—By Henry Phillips, Jr.—Bronze Knife, Folk Lore,	328
NOTES FROM THE FAR EAST—By Prof. John Avery—Literary Culture in Bengal, High Asia,	330
BOOK REVIEWS—The Maveric National Bank Manual; Memorials of a Half Century	334

# TABLE OF CONTENTS.

vii

## CONTENTS OF VOL. IX., NO. 6.

	Page.
FRONTISPIECE—BUFFALO IN 1812, - - - - -	
ARCHÆOLOGY AND ARCHÆOLOGISTS IN WESTERN EUROPE, An Epitome of History—By Thomas Wilson, - - - - -	335
ABORIGINAL COMMUNAL LIFE IN AMERICA—By Rev. W. M. Beauchamp	343
ON CERTAIN SUPPOSED NANTICOKE WORDS SHOWN TO BE OF AFRICAN ORIGIN—By Dr. D. G. Brinton, - - - - -	350
PORTRAITS OF COLUMBUS IN HAVANA—By Prof. J. D. Butler, LL.D., - - - - -	354
THE DOCTRINE OF PROVIDENCE AS HELD BY THE ORIENTALISTS IN ANCIENT TIMES—By Rev. Wm. Tucker, D. D., - - - - -	356
ESONE, THE FORSAKEN—A Poem—By Mrs. Harriett Newell Swanwick	360
CORRESPONDENCE—Mounds and Lodge Circles in Iowa, by Prof. Frederick Starr; River Dwellings in the Mud Flats of the Delaware River, H. T. Cresson; Mounds in Michigan, W. H. Sheldon; Pottery Vases, Are they Frauds? Dr. A. C. W. Beecher; The Worship of Priapus Among the Indians of British Columbia, James Deans; Phenix Laws, Prof. A. W. Williamson, Beauchamp's view of; Mr. Wyman's Copper Implements, Dr. J. D. Butler, - - - - -	361
EDITORIAL—Buffalo in Prehistoric Times, the Geology, Geography and Aboriginal History of the Region; Spool Ornaments and Ear-rings, - - - - -	372
FRAUDULENT POTTERY RELICS, - - - - -	385
ETHNOLOGIC NOTES—By A. S. Gatschet, - - - - -	386
NOTES FROM THE FAR EAST—By Harriet G. M. Murray-Aynsley, - - - - -	387
LITERARY NOTES—The Communistic System; Bartram and Jones on the Communistic System; Mound Explorations; Cremation; Relics Secured by Peabody Museum; Two Links; Fairy Rings; Pre-Historic Trephining; A New Zodiac; Brass Kettle Found in a Mound, - - - - -	389
BOOK REVIEWS—Twentieth Annual Report of the Peabody Museum: Iowa Historical Record, Article on Geography and Early American History, by A. B. Hinsdale; Papers of the American Historical Society, The Louisiana Purchase in its Influence upon the American System, by Rt. Rev. C. F. Robertson, D. D., History and Management of Land Grants for Education in the Northwest Territory, by George W. Knight, Ph. D.; Ohio Archaeological and Historical Quarterly; Hours with the Bible, or, The Scriptures in the Light of Modern Discovery and Knowledge, by Cunningham Geikie, D. D.; How We Got Our Bible, by J. Patterson Smythe, A. B. LL.D.; Old Testament Characters, by Cunningham Geikie, D. D.; Biblical Topography, by Rev. George Rawlinson, M. A.; Japanese Homes and their Surroundings, by Edward S. Morse, with illustrations; The Camelot Classics, Great English Painters, arranged and edited by William Sharp, Malory's King Arthur, edited by Ernest Rhys; Jewish Artizan Life, by Franz Delitzsch, D. D.; Winter in India, by the Rt. Hon. W. E. Baxter, M. P., - - - - -	394

BOOKS RECEIVED—Comparative Vocabulary of Algonquin Dialects; A Prairie Tragedy, the Fate of Thomas Simpson, the Arctic Ex- plorer, by Alex. McArthur; Annual Report of the Manitoba Historical and Scientific Society, Winnipeg; The Chinook Winds and other Climatic Conditions of the Northwest, by A. Bowerman, M. A.; The Souris Country, by George Bryce, LL.D.; Our Winter Birds, by Alex. McArthur; The Footsteps of Time in the Red River Valley, by A. McCharles; The French Element in the Canadian Northwest, by Lewis Drummond; Some Red River Settlement History, by Charles N. Bell, F. R. G. S.; A List of the Mammals of Manitoba, by Ernest E. Thompson; Ad- dress Delivered before the Confederate Survivors' Association, by Colonel Charles C. Jones, Jr., LL.D.,	399
LIST OF EXCHANGES, - - - - -	401

0

THE  
*American Antiquarian.*

---

VOL. IX.

JANUARY, 1887.

No. 1.

---

4 THE INDIANS OF PUGET SOUND.

FIRST PAPER.

In the following pages I have tried mainly to describe the Indians of Washington Territory as they were formerly, with frequent allusions, however, to their present condition. They are now in a state of transition, some being more advanced in civilization than others. In a general way I should say of the greater part of those under forty-five years of age, that if they had white skins, talked the English language,—if a part of them had abandoned their belief in their medicine men,—as some have not done,—if they travelled in boats instead of canoes, if their women wore hats or bonnets on their heads, and if they were neater, they would be called civilized, at least as much so as the lower class of whites. Consequently I have often been obliged in the following pages to use the word "were" instead of "are;" and sometimes on account of the difference of civilization between the younger and older ones, and the difference also in different localities, it has been somewhat difficult to know when to say "are," and when to say "were," and yet in order to describe the Indians correctly, it has seemed to me, that I ought to make a distinction.

My residence during the past twelve years has been on the Skokomish reservation, among the Twanas; a few Squaksons and Clallams having also lived on the same reservation. My work as a missionary has been among these three tribes, and with the few Chemakums, who are left. Consequently my observation of the manners and customs has been mainly among them. Indians from nearly all the other tribes on the main part of Puget Sound have either intermarried with those of this reservation, lived here for a time, or made visits here, and I have visited some of these other Indians at their homes, so that I have had an

opportunity to see considerable of other tribes, and I have here recorded what I have thus learned. Hence I have entitled the work, "The Indians of Puget Sound," although the greater part of the work refers to the four tribes first mentioned; for the habits and customs of all the tribes on Puget Sound, although speaking different languages, are much the same.

I have been surprised to see how little has been written about these Indians. As far as I can learn, Vancouver, in 1792, was the first writer who speaks of them, but his notices of them as a discoverer, are necessarily very meager. Commodore Wilkes in 1841 is the next. Gathering his information largely from the officers of the Hudson Bay Company, he was more full, yet his statements refer more to the number and situation of the tribes than to their manners and customs. Dr. George Gibbs made a report in 1854 to Captain George B. McClellan, of the same character, but a year or two later wrote out by far the fullest account extant of their habits and customs, which, however, was not published until 1877, when it was printed by the Ethnological Bureau at Washington in Vol. I. of contributions to North American Ethnology. In it is also given a vocabulary of the Nisqually languages. He also prepared a small dictionary of the Clallam and Lummi languages, which was published in Shea's Library of American Linguistics, very few copies of which are extant. In Tolmie and Dawson's Comparative Vocabularies of the Tribes of British Columbia, (Montreal, 1884,) are given short vocabularies of about two hundred words in the Snohomish and Chehalis languages. Early residents among the tribes on the Columbia river, as Ross Cox, G. Franchere, and Alexander Ross, have written fully in regard to those tribes, and Hon. J. G. Swan has described the Indians on the Pacific coast of Washington Territory, but no resident among the tribes on Puget Sound has described them with perhaps the exception of Dr. Gibbs, and his residence, was, I believe more properly among the whites of the Sound, than with the Indians, though his eyes and ears were open, and he gathered information largely from other whites.

#### NAMES AND SITUATION OF THE TRIBES.

Before giving the names of the tribes, I wish to speak of two elements which are common to a large number of them, the initial "S," and the termination "mish," or "bish."

S. This initial begins a large number of Indian words, especially names in the region, and when these were first written by the whites, it was generally separated from the rest of the word by an apostrophe, thus: S'Kokomish, S'Nohomish, S'Klallam, S'Na-nai-mo. In the first two of these, of late years, the apostrophe has been dropped by the whites, and the second letter

changed to a small one; in the two latter the S has been dropped.

The meaning of the letter I have been unable to learn. It has sometimes seemed to me that they use it, or drop it, without attaching any meaning to it. In conversation I have heard the Twanas speak of the Makah and Haida Indians as S'Makah and S'Haida, and yet when I asked them what tribes they spoke of, they said Makah and Haida. In gathering common words I have often been puzzled, because in pronouncing them sometimes they would begin the word with an S, and on pronouncing it a second time, they would leave off that letter. In these common words I have, after considerable study, come to the conclusion generally to drop the S, as the more correct way.

On questioning one of the most intelligent educated Twana Indians on this point, he said that there was a reason why it was used, but that he could not explain it to me in English.

*Mish or bish.*—This termination enters into a large number of names in the land occupied by the Indians speaking the Twana, Chehalis, and Nisqually languages, as follows. Among the Twanas, Skokomish, or Skakabish, and Kolsidobish; among the Upper Chehalis, Sats-a-pish, and Ow-il-la-pish, and many others; among the Nisqually speaking tribes, Snohomish, Squaks-hamish, Du-wa-mish, Samish Stillaquamish, Swinomish, Skywhamish, Sukwamish, and at least twenty others.

I am satisfied that it means people, although it has taken me a long time to come to this conclusion. On the subject I have been able to obtain very little light from the Indians. One very intelligent Indian and one white man, well versed in Indian affairs gave me as their opinion that it meant much the same as it does in such words as Flemish, Scottish, English, and the like, but I have been unable to accept this, as Puget sound is too far from Europe to allow me to believe this the origin for this termination. The word for Indians, or people in Twana is Klo-wal-bish; in the Upper Chehalis, it is E-la-mish; and in Lower Chehalis, Klo-wal-bish. It is hence very natural that in speaking of certain people, they should add the termination bish or mish to the name of the place where they live: for instance Kol-sid is the name of a bay in the Twana territory, and Kol-sid-o-bish that of the Indians living there. One thing only puzzles me, and that is that in the Nisqually language which is spoken by far more Indians than the three languages above named combined, the word for people is Atc-il-tul-bo. This termination however may have been given to their names by the other tribes mentioned, or there may be some way of explaining this which I have not yet learned, as all of their languages are closely related.

*I. Twanas.*—Their name is spelled Too-an-hooch, in the treaty which was made in 1855; the Clallams, Squaksons, Chehalis, and Indians on the eastern side of Puget Sound say Tu-an-hu; and



the Twanas say Tu-ad-hu. These various pronunciations have been shortened in Twana, now used in all government reports. Mr. George Gibbs says that the word means in the Clallam tongue, a portage and to be given to them from the portage between the head of Hood's Canal, and North Bay, a branch of the main Sound, where the Indians by carrying their canoes across an isthmus three miles wide, avoid going around a peninsula, the extreme point of which is sixty-five miles from this portage by water. I have never been able, however, to verify this meaning from the Twana Indians, some of whom deny it, and others of whom say that they do not know its meaning.

They originally occupied both sides of Hood's Canal for its whole length. They were divided into three bands, the Du-hle-lips, Skokomish and Kol-sids.

The Du-hle-lips lived at the head of the canal, where a small stream empties into it, called by them Du-hle-lip, but now named by the whites Union Creek, and for about ten miles below the head.

Fifteen miles below Union Creek the Skokomish band who lived around the mouth of the river of that name, where is the present reservation. This name is pronounced Ska-ka-bish by the Twanas, and Ska-ka-mish by the Clallams. The Americans have changed it to Skokomish, and thus they universally spell the name of the river, reservation and postoffice. Dr. Gibbs in Vol. I, "Contributions to North American Ethnology," gives this as the name of the whole tribe, but it was originally only the name of one band; though now, as it is the name of the river and reservation, the whole tribe are known better to the whites on the Sound by the name Skokomish than by their original one of Twana. Ska-ka-bish, means "the river people," and was naturally given to them as theirs is by far the largest river on Hood's Canal. Kain Twana means "fresh water." It is doubled, that being one form of the plural, doubtless because of the size of the river.

Thirty miles below the Skokomish river lived the Kuil-sids, or Kuil-sid-o-bish, as pronounced by themselves, who lived around the Kuil-sid bay, the northern arm of Hood's Canal and the mouth of the Duk-a-boos, and Dos-wail-opsh rivers. I have heard them speak of this band as Kuil-sid-o-bish. The Clallams call the place Kol-sin. As a postoffice the Americans spell it Quill-cene, and hence I shall use that orthography.

These three bands were not always at peace, but waged petty contests with each other. For more than twenty-five years, however, most of them have been collected on the same reservation, have been on good terms with one another, and have intermarried, so that these band distinctions are now practically obsolete. When however the older Du-hle-lips leave the reser-

vation for fishing, they are apt to go to their old waters, and the same is true of the Quil-sids.

The dialects of these three bands formerly varied a little: thus the word for go in Du-hle-lip was bi-se-dab, while in Skokomish it was bi-he-dab. But at the present time I have not found it practicable, in collecting a vocabulary, to separate the dialects. I have gathered most of the words from the older school-boys, who have been brought up on the reservation, and who have heard all of the dialects, which are rapidly merging into one. Generally I have found it necessary to use English speaking Indians for the purpose, and the older school boys are the best there are.

At present most of these Indians live on the S'kohomish reservation. About thirty live around Seabeck and Quil-cene.

Although the Squakson tribe, by treaty and language, belong to the Nisqually Indians, yet about thirty of that tribe, since the selection of the Skokomish reservation, have moved to it, and have become incorporated with the Twanas. They did so because their own people for a time were scattered, because of the nearness of the reservation to their old huts and its advantages, and because of numerous intermarriages between them and the Twanas. For the most part, they use their own language, but they understand the Twanas, and the Twanas understand them. Twenty-five others for a time became connected with the Twanas, but because they did not obtain titles to the land on the reservation as soon as they expected, and as soon as they had a right to expect from Government promises, they became discouraged and left.

*II. The Chemakums.*—North of the Twanas were this tribe. In the treaty their name is written Chemakum. Dr. George Gibbs writes it Tsein-a-kum. Hon. J. G. Swan follows the orthography of the treaty, which represents most correctly the way in which both the Indians and the whites of the region pronounce it. The whites call a prairie by the same name. Its origin or meaning I cannot learn. These people call themselves A-hwa-ki-lu, as well as Chemakum.

They formerly occupied the land from the mouth of Hood's Canal to the mouth of Port Discovery Bay. According to their tradition and that of Kwilleutes, they originally came from the latter tribe, who live on the Pacific Coast about thirty miles south of Cape Flattery, and a hundred and twenty-five miles distant, and from whom they are now separated by the Makahs and Clallams. Hon. J. G. Swan says in regard to this in his work on the Makahs (p. 57.) that the Kwilleutes have a tradition that a long time ago, there was a very high and sudden tide which took four days to ebb, after which a portion of the tribe made their way to the vicinity of Port Townsend, and are known as Che-

makums. The latter tribe have a similar tradition, and the numerals of the two tribes seem to corroborate this.

They are said to have been originally a warlike tribe, not very numerous, but strong and brave. They had a village at the head of Port Townsend Bay, called Tsets-i-bus, which is said to have been a kind of capital for nearly all the tribes on the Sound, where they occasionally collected for various purposes. Dr. Gibbs 1852 states their number to have been ninety, but they are now virtually extinct, there being only seven left, who are not legally married to white men or into other tribes. Of these there is only one complete family, and it has connected itself with the Clallam Indians at Port Gamble. With the exception of one or two very old ones they now commonly use the Clallam language. They say that their diminution was caused by the small-pox, but probably war had something also to do with it, as Dr. Gibbs says that they had been engaged in wars with the Makah, Clallam, Twana, Snohomish and Duwamish Indians, by whom their power was broken.

*III. The Clallams.*—In the treaty this name is spelled S'Klallam. The s has already been explained. It is now generally dropped, and the k changed to c. A county is named from it, which has dropped one l and in some official seals the word is spelled Clalm. Other tribes now call them Klallam and S'Klallam. It evidently originated from their own name for themselves Nu-sklaim, which means a strong people for they formerly were a strong tribe.

Their territory formerly extended from Port Discovery Bay west to the Hoko river on the northern coast of Washington Territory. The treaty expected them to go to the Skokomish reservation, and the Government was to furnish the means for this purpose. This has never been done, and they have never been moved, and probably never will be. At present many of them have moved further up the Sound to obtain work. The following is a description of their villages. (1) Across the bay opposite Port Gamble is quite a village, of them who earn their money largely at the sawmills there. (2) Around Port Ludlow are a few who fish and work in the sawmill. (3) Near Port Townsend are a few more who make their living by fishing. (4) Opposite Port Discovery is a small village of those who live mainly by working in the sawmill. (5) At Sequim is another small village the most of whom are old, and live by canoeing, fishing, and clam digging. (6) At Jamestown, five miles from Dungeness, is a flourishing village of those who have obtained land; it is the home of the head chief, where there is also a school, church, and jail. They gain their living by working for the neighboring whites, by farming on this land and by canoeing and fishing; a dozen years ago these were a worthless set, being so often drunk that the neighboring whites petitioned the Agent to remove them

to the Skokomish reservation; hearing of this the leading ones, as they did not wish to be removed from the land of their fathers determined to reform. Gathering together five hundred dollars, they bought two hundred and ten acres of land, divided it among themselves according to the amount contributed by each one, and have since that time been slowly improving it. They have also improved in morals until now they are the most civilized and prosperous band of the tribe. (7) At Port Angelos has been another village of some importance. Many years ago the U. S. Custom House was here, work was abundant, and the Indian village lively; but the Custom House was afterwards removed to Port Townsend, most of the whites moved away, employment became scarce, and nearly all of the Indians have gone, a good share moving across the Straits to the British Columbia side. (8) At Elkwa was formerly the largest band of the tribe, but they have now grown less numerous and weaker. Five or six of them have homesteaded land a mile or two back from the beach, the only ones of the tribe who live so far away from the salt water. These Indians live by canoeing, fishing, and what they raise on their places, and in the latter part of winter and spring go to the Makah waters for seals. (9) At Pysht are a few families, who live mainly by fishing and sealing. (10) At Clallam Bay a number, about the year 1880, bought about a hundred and fifty acres of land, in imitation of their Jamestown neighbors, but they have not progressed as rapidly, owing to the facts that fewer whites live in their neighborhood to encourage them, and that more of their number are rather old, and so less progressive than those at Jamestown. They raise a little on their land, they fish and seal.

According to the Census which I took for the United States in 1880 the Clallam Indians were then distributed as follows: six were on or near the Skokomish reservation, ten at Seabeck, ninety-six at Port Gamble, six at Port Ludlow, twelve at Port Townsend, twenty-two at Port Discovery, eighteen at Sequim, one hundred and twenty-two at or near Jamestown, fifty-seven at Port Angelos or across the straits from that place, sixty-seven at Elkwa, twenty-four at Pysht, forty-six at Clallam Bay and three at Hoko. Since that time those at Skokomish, Seabeck and Hoko have left those places, nearly all have gone from Port Angelos, while the numbers at Port Ludlow, Port Townsend and Port Discovery have increased.

I can learn of only two dialects spoken by this tribe, those at Elkwa, Pysht, and Clallam Bay, speaking it is said, as if with thicker tongues, than the others, and so pronouncing some words different.

*IV. The Lummi.*—These Indians were situated on the East side of the Sound to the extreme northern part of Washington Territory. They speak another dialect of the Clallam language,

and for some reasons ought to be included in the account of that tribe, but owing to their situation were included in the treaty made with the Snohomish Indians and others in that locality, and hence have become virtually more distinctly separated from the Clallams than they were before the treaty was made. There were three bands of these, the Lummi proper, who lived about the mouth of the Nook-sack river; the Swallah who lived on Orcas, San Juan and the Buk-sak, who lived up the Nook-sack river. According to Dr. Gibbs, this latter band spoke a dialect, so different from the Lummi as to be almost unintelligible to them.

*V. The Samish.*—These Indians lived about the Samish river, south of the Lummi. They speak the same language, but are said to be a distinct tribe. There were but two bands of them; the Samish, who lived at the mouth of the river, and the Bistla-tlous, who lived up the river.

*VI. The Skagits.*—This tribe lived south of the Samish Indians, and by language are more nearly related to the Snohomish and Nisqually tribes, on the south, than to their northern neighbors. They lived mainly near the Skagit river. As near as I can learn from the Indians there were five bands: the Swinomish, who lived on the salt water not far from the mouth of the river, and on Fidalgo and the northern part of Whidbey's Island, opposite; the Do-kwa-tcabsh who lived on the river at the mouth; the Sba-li-hu, who resided further up on what might be called the middle of the river; the Sba-le-hu, whose country was on the northern branch which flows from Mt. Baker; and the Sak-wi-be-hu, who lived on the southern branch of the river. Dr. Gibbs also mentions the Kikiallu, Nukwatsamish, Tow-ahha, Sakumehu, Miskaiwhu, Miseekwigweelis, and Skwonamish, but does not state whether they are villages or bands, or where they live.

*VII. The Snohomish.*—These lived south of the last named tribe south of the Stillagwamish river to the Snohomish river and on both sides of it and its branches. The Indians speak of four bands, the Du-gwads-habsh, who lived on the southern part of Whidbey's Island; the Snohomish proper, whose home was near the mouth of the river of that name; the Ske-hwa-mish, on the north fork of the Snohomish river, which on some maps is marked the Skywhamish, and on others the Skykomish; and the Snoqualmie, who lived on the southern branch of the Snohomish river called the Snoqualmie river. Dr. Gibbs also mentions the Sktah-le-jum, Kwehtl-mamish, and Stolutswamish bands. While he confirms the statements of the Indians that the Snoqualmie or Snokwalmu band was very intimate with and properly belonged to this tribe, he also says that their dialect of the language agrees more nearly with the Indians on their south, that is with the Nisqually language proper.

*VIII. The Duwamish.*—These lived on the Duwamish river and its tributaries, and on the islands and peninsula across the

sound, west of the same region. Some of them are on the Port Madison and some on the Muckleshoot reservation. They were divided into several bands, as the Duwamish, Sukwamish Samamish, Skopahmish, Sk'telmish and St'kahmish.

*IX. Puyallups.*—These were formerly call Puyallupahmish and lived on the Puyallup river and Vashon's Island opposite its mouth. The Puyallups proper lived about the mouth of the river, the T'kaw-kwa-mish, on its upper branches, and S'ho-mamish on Vashon Island. They were formerly not very important, but have of late years become so, because their reservation is the most valuable on the Sound.

*X. The Nisqually, or Squalliamish.* These lived mainly about the Nisqually river, south of the Puyallups and about Olympia and some of the bays west of it. The bands were the Stulakumamish; who lived near where Steilacoom now is; the Segwallitsu, the S'hotlemamish, of Case Inlet or North Bay; the Sahehwamish of Hammersly Inlet, or Skookum Bay, the Sawamish of Totten Inlet or Oyster Bay; the Skwaiaitl of Eld Inlet or Mud Bay; the Stehtsasamis of Budd Inlet, where Olympia now stands; and the Nusehtsatl of Henderson's Inlet or South Bay. Dr. Gibbs includes the Puyallups with these as one tribe, and probably this was correct formerly, but they have now become separated into two tribes owing to reservation system.

*XI. The Squaksons.*—East of Twanas and west of the Puyallups at and around the base of the great peninsula between Hood's Canal and the main Sound, were the Squaksons; or Skwaksnamish. They speak a dialect of the Nisqually language, and were included in the treaty with that tribe at Medicine Creek, but owing to their nearness to the Skokomish reservation, about twenty miles, and their intermarriages with the Twanas, their children have been largely brought to the Skokomish reservation to school, and I have visited them as a missionary of late years.

*XII. The Upper Chehalis.*—These Indians live on the upper branches of the Chehalis river as far down and including the Satsop. Their proper name is not Chehalis; they have given me Kwai-ailk as their name; Dr. Gibbs says that they are known by the Sound Indians by the name of the Staktamish, by others as the Nu-so-lupsh, and by the Willowpah, as the Kwuteh-ni. The Chehalis proper live near the mouth of the Chehalis river, and they thus gave their name to the stream; the whites having first visited it at the coast; after that the Indians on the upper branches became known as the Upper Chehalis Indians. I have not been able to learn that they were divided into bands, but one Indian has given me the names of forty-eight villages, which they once occupied between the Satsop branch and the Cascade mountains.

M. ELLS.

X  
P<sup>sc</sup>

## VILLAGE LIFE AND CLAN RESIDENCES AMONG THE EMBLEMATIC MOUNDS.

### NINTH PAPER.

The subject of villages and clan residences is one which we believe will interest our readers. We propose to treat it in connection with the Emblematic Mounds. It is a theme on which the author has written already,\* but much more material has accumulated and the points which were then put forth as tentative may be regarded as now established.

I. The existence of village life among the Emblematic Mound Builders will probably not be disputed, yet we shall go over a few of the arguments to show that it did exist.

1. Village life prevailed among the Indians of all classes, both those which were in the hunting state and those who had reached a high state of agriculture. The Indians of the south, discovered by Ferdinand De Soto,† were all of them living in villages. Those in Illinois and Wisconsin, according to the descriptions of Marquette, La Salle, and others, were also village residents.‡ The Indians of New York and other states, described by Champlain, and those in Indiana and Ohio invaded by Gen'l Anthony Wayne were dwelling in villages. The explorers, Pike, and Long, and Carver the traveller, describe the Indians of Kansas, Minnesota, and Dakota, as situated in villages.

There may be a question as to whether villages constituted clan residences. There were villages in which many tribes seem to have been congregated. One such town is described by the Jesuit, Allouez, as situated on the banks of Green Bay. There were here the representatives of six tribes all dwelling near together.|| A village of that mysterious tribe, called the Mascoutens, was visited by the same missionary, and the representatives of several different tribes were also found dwelling near. This was a time however when the Algonquin tribes were very much disturbed and were seeking refuge from the cruel Iroquois. Catlin speaks of the Mandans on the Missouri River as dwelling

\*See Transact. Wis. Acad. of Sc.; 1881-'83. Vol. VI.; p. 154. Ancient Villages among the Emblematic Mounds.

†See Narrative of the Expedition of Hernando De Soto in Hist. Coll. of La., Part II, Translated by Richard Hackluyt, 1609; pp. 134-137, etc.

‡See An Account of Some New Discoveries in North America in 1673, by Pere Marquette Sieur Joliet, translated from the French. Hist. Coll. of La.; Part II.; p. 279.

||See History of Catholic Missions, by J. G. Shea; p. 362.

in villages by themselves, and has given a map on which are traced the wanderings of the Mandans.

2. The traditions and customs of later tribes furnish another proof. It is well known that the Indians of various tribes have favorite places to which they resort for generation after generation. Some of them have their winter abodes in permanent villages and then spend their summers in temporary encampments.\*

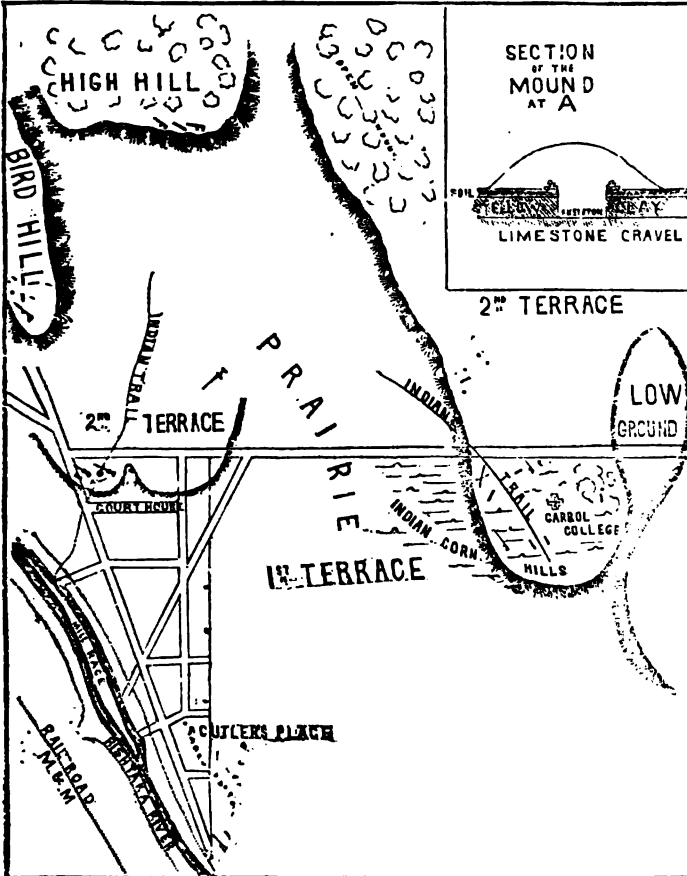


Fig. 134.—MAP OF EARTHWORKS AT WAUKESHA.

3. The succession of races betokened by earth-works and relics would show that village life existed through all the periods. The tokens which belong to Emblematic Mound Builders are not the same as those left by later tribes, yet they are often found in the vicinity of villages known to have been occupied even late

\*See Parkman's Oregon Trail, Chap. XIV. Also Greggs Commerce of the Prairies, Vol. II, p. 37.



in history, showing that the same localities were chosen for residence by the earliest and the latest people.

4. The similarity of the mode of life and culture of the Emblematic Mound Builders to the Indians, render it probable that they were villagers. We have elsewhere divided prehistoric society into different grades according to occupation as follows: fishermen, hunters, agriculturalists, villagers or pueblos, semi-civilized and civilized. These different grades of society are found in different geographical districts. The emblematic mounds are found in the district which naturally belongs to hunters.

We have no doubt that the Emblematic Mound Builders were hunters, but they were also agriculturalists. The fact that the effigy mounds are situated on the banks of lakes and rivers near rice swamps and in the vicinity of forests, would indicate that they drew their subsistence from the same sources that the later Indians did. The garden beds which are found in so many places, favor the idea that they were agriculturalists and that agriculture was with them carried to a higher state than it was with the Indians. Permanency of occupation is, however, manifest in all their works, and we must believe that if the Indians even in their most unsettled state, made their abode in villages; the Emblematic Mound Builders certainly did.

5. The identification of village sites in the mounds and earthworks is another evidence. This is a somewhat difficult thing to do, yet it has been done in certain cases and may be in others. We do not say that many villages of the Emblematic Mound Builders have been identified, and yet the villages of the Indians who built mounds, have been found in such numbers that we are able to determine the characteristics of village life in general, and so are aided in our task. There are places where villages are known to have existed, and in many of these places tokens are found which would indicate that near the same spots the effigy builders also had their residence. Several such localities have been visited by the writer. One at Lake Koshkonong; another at Sauk City on the Wisconsin River; another at Prairie du Chien on the Mississippi River; another at Marquette on the Fox River; another at Red Banks on the south shore of Green Bay. Dr. I. A. Lapham has described several places where Indian villages have succeeded Mound Builder's villages, the tokens of the different races being left on the same ground. One such place was found at Indian hill, near Milwaukee now occupied by the cemetery called Forest Home. Another at Indian Prairie, near Humboldt, six miles north of Milwaukee.\* Another at Waukesha on a spot now occupied by the college grounds. Fig. 134.

It is worthy of notice that the Mound Builder's villages, the Indian villages, and the villages and cities occupied by the white population, are all in the same localities. What is more, the

\*See Lapham's *Antiq. Wis.*, pp. 12 and 13. Pl. IV.

very spots which are chosen as the most beautiful places for homes are those which were also selected by this unknown people. The love of the beautiful prevailed with them as with us, and the same appreciation of natural advantages existed among all the races.

6. The number of the effigies which surround these village sites shows that the Emblematic Mound Builders were residents for a longer time and were perhaps more numerous. It is noticeable that the effigy mounds are near lakes and rivers, and that between the groups of effigies there are burial mounds which probably belong to the later tribes. The effigies are, however, more elaborate, show more pains-taking, and convey the idea that the builders of them were more permanent and of a higher grade of culture. The relics of the Indians are, in certain localities, more numerous than those of the Mound Builders, but the earth-works of the earlier race are much more numerous than those of the latter.

The Indians built mounds but are not known to have built effigies. Their burial mounds are interspersed among the effigies. The groups sometimes are combined together, but more frequently separated or at short distances. The effigies are generally upon higher ground while the burial mounds of the Indians are on low ground or at a height mid-way between the village sites and the effigies.

7. Another reason for supposing that the effigy builders dwelt in villages, is that there are so many uses to which their works were subjected. We have already described the game drives, the garden beds, the signal stations, sacrificial places, and have referred to council houses and dance grounds. Tradition has often times fixed upon the same places as the spots where the Indians had their feasts, their dances and their councils, and we sometimes find the rings which mark the site of their council houses in the midst of the effigies. The corn hills will sometimes obliterate the rings and cover the effigies. We conclude from this mixture and combination of tokens and especially from the variety of uses, that the same kind of life prevailed. Villages were occupied and were built near the same spots.

8. The proximity of the effigies to the villages of certain tribes has given rise to the question whether they were not built by them. In examining the villages of different tribes, we have found that only one can be taken at all to be effigy builders, namely, the Winnebagoes. We are not certain that they built the effigies, but there are places where it would seem as if they might have been the people. We know that the Sacs and Foxes, the Pottowatomies, were only temporary sojourners. The Menomonees were more permanent, but the Winnebagoes seem to have been the original occupants. The matter would lie between them and the Mascoutens; that is, if we were to take any known tribe. The

Mascoutens disappeared early, and only one or two villages have been identified as belonging to them. The Winnebagoes were earlier residents, and at the same time remained later. They belong to the Dakota stock, and this may account for the difference between them and the later Indians. An examination of the different localities where Indian villages have been located always proves interesting, especially if we can reach those places where the Winnebagoes dwelt.

II. We propose to describe some of the villages of the Emblematic Mound Builders.

[I.] The first will be the village at Waukesha. This has been described by Dr. I. A. Lapham. We give a map (Fig. 134) which has been reduced from one in Dr. Lapham's book.\* This map will show the location of the effigy mounds on the heights of ground surrounding the present city. It will be noticed that there are effigies on the college grounds. This was the site of

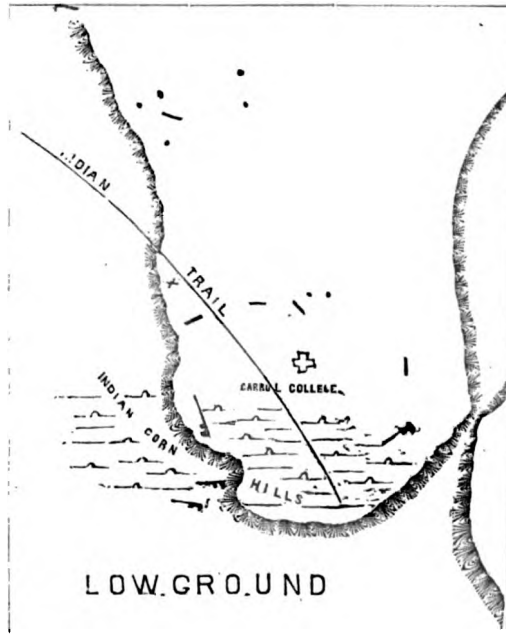


Fig. 135.—CORN HILLS AND INDIAN TRAIL.

an Indian village at the time of the first settlement of the place. The Indian trail was discernible in 1836, at the time that the effigies were surveyed. The trail has disappeared but the corn hills may still be seen, not on the college grounds, but on the low grounds surrounding the college campus. The effigies near the court house have been destroyed, but the round mounds on

\*See *Antiquities of Wis.*, Pl. XVIII, and XIX., p. 26.

Figs. 134, 135 and 136 all represent the same spot; the first represents the village with its surroundings; the second the village with Indian corn hills; the third with effigies.

Cutler's place and a few of the effigies on Bird Hill are still left. The place is interesting because it shows that the same locality was occupied by the effigy builders and by the later Indians. The encampments of the Indians when the effigies were surveyed, were on the very spot where we may suppose a more ancient village was located. The corn hills are evidently later than the effigies, but they are preserved and so we have the tokens of the two races, side by side.

1. The situation of the Mound Builder's village is here worthy of notice. It was on a rise of ground which was surrounded by

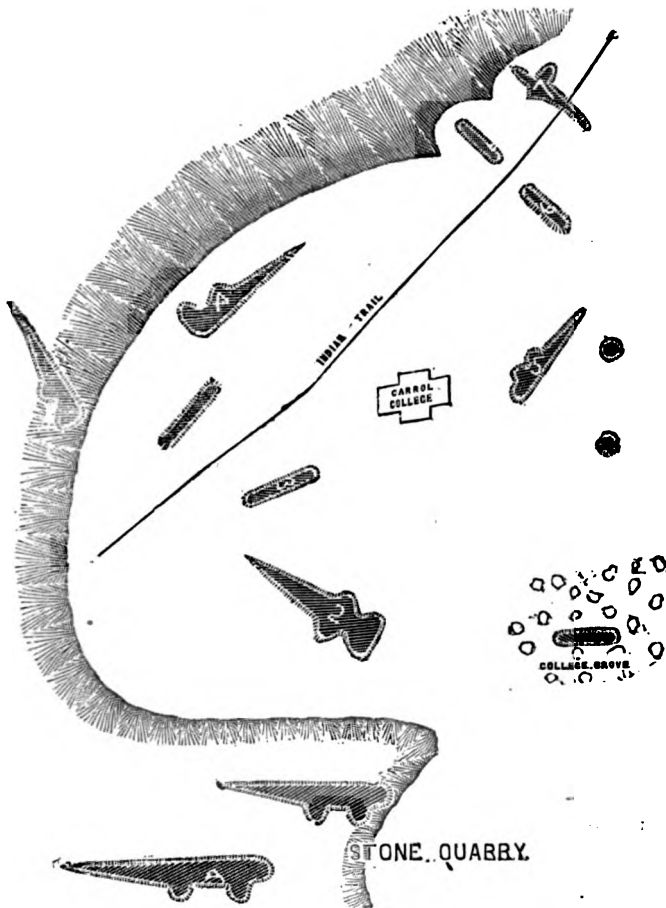


Fig. 136.—EFFIGIES IN COLLEGE CAMPUS AT WAUKESHA.

swails or marshes, and which overlooks the prairie on which the city is now built. The effigies are arranged around the edge of the hill, two of them only being on low ground. See Fig. 135.

2. The arrangement of the effigies is significant. They enclose

an open space which is perfectly level; two of them are arranged parallel to one another, and the trail passes between them. It is possible that a stockade formerly stood outside of these effigies and that the parallel mounds marked the gate or entrance to the village. It will be noticed that the break in the hill is guarded by three effigies, and that this is near the so called entrance. It is possible that the path or trail which led from the river to the village went up at this spot. See Fig. 136. The village is guarded on one side by turtle and panther effigies which seem to crowd the hill near the entrance as if to guard the village from approach.

3. The totem of the village. We find three prevailing types, the turtle (2), the wolf (4), the panther (5), and the bird (7). The map discloses the fact that a turtle was near the court house, the eagle on Bird Hill, and a panther on the high hill north or east of Bird Hill. The clan emblem cannot be determined by these. Dr. Lapham has described a group of four panthers, or as he calls them, lizards, on a high bluff one and a half miles north-west of the village, at the crossing of the old Madison road. The panther seems to be the prevailing effigy.

4. The Relics. Dr. Lapham dug into one of the mounds marked A. on the map, and found two feet below the original surface of the ground, a human skeleton lying on its back surrounded by stones. The stones had been placed over the body and at the sides, forming a rude sort of coffin; in the left hand was a pipe of baked clay and a quantity of red paint; in the right hand was a smaller pipe cut from a soft stone. At the head were found fragments of pottery; portions of two vessels. He says the pipes, the red paint, and the pottery, are so many circumstances connecting this mound with the recent race. It must be remembered, however, that the mound was not an effigy but a common round mound, and may have been built by the people who made the corn hills, a race succeeding effigy mound builders.

[II.] The second location where a Mound Builders village has been discovered, is at Great Bend. We present a map of the region taken also, from Dr. Lapham's book. See Fig. 137.

It will be noticed that there is here a group of mounds composed of caches, effigies and long mounds. These are near the so called village. They are on Secs. 24 and 25, T 5, R. 19. land belonging to Mr. A. Putnam. Upon the opposite side of the river, on the summit of a high ridge, is what may be called a look out. On the same side of the river, a mile and a half north and west, is a group of effigies, the object of which is unknown. Still further west at a place called Crawfordsville, Sec. 28, is a large group of effigies which we have called a game drive. It will be noticed on the map that the river takes a big bend but that half a mile distant is an extensive prairie while in the immediate vicinity of the river are swamps full of wild rice; that the location of

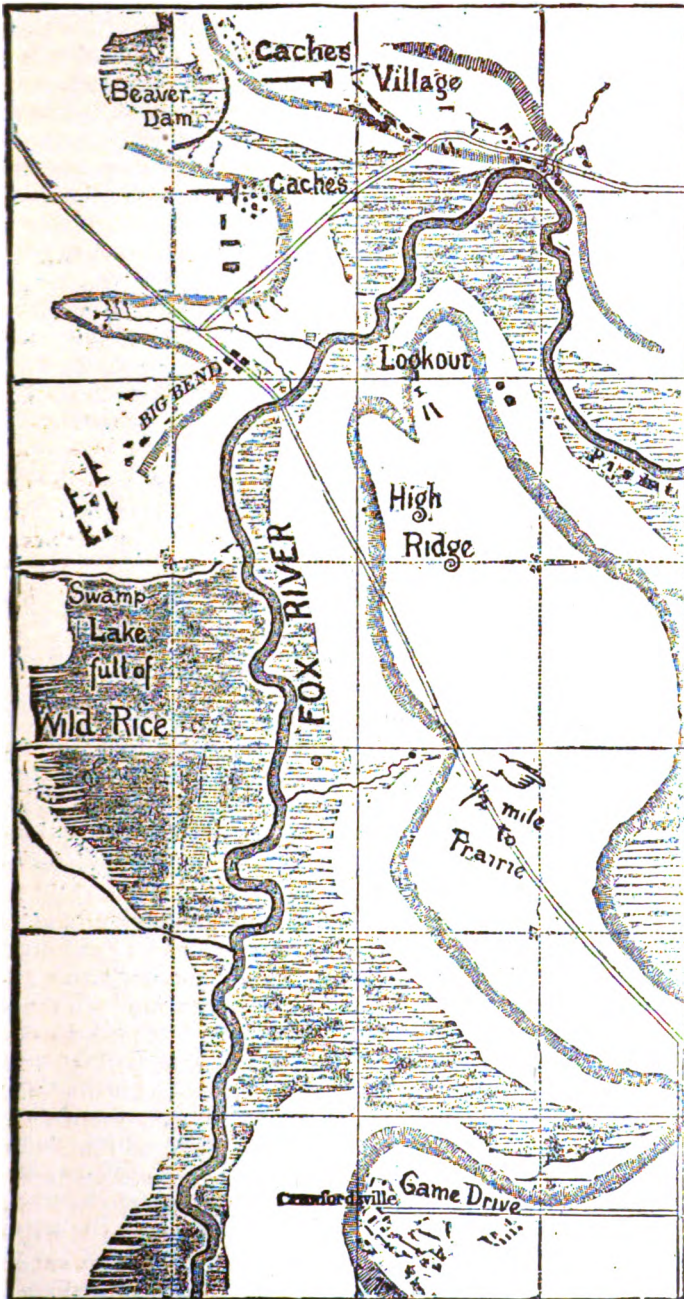


Fig. 137.—MAP OF EARTHWORKS NEAR GREAT BEND.

the village is at the bend of the river near a beaver dam, and that two small streams run at either end of the hill on which the village is situated. The village is guarded by the lookout, it is also defended by its situation, and yet it is near the place where subsistence could be gained. The river would furnish fish, the swamps wild rice, the forests abounded with nuts and wild fruits; and the prairie would furnish game of the larger kind such as buffalo, elk, and deer. The game drives are situated at either end of the swamp as if the object was to drive the deer into the water, and to shoot into them as they ran from the forests or the prairie, into the water. We see then from the map, the habits of the people who built the effigies; and that they were not very different from those of the later Indians. The writer visited this locality at one time and discovered that it was a village. It was the first place where village life with all its parts was brought to our notice. The following are the features which proved it was a village site:

1. The first object which attracted our attention were the caches. These were situated on the edge of the beaver dam, in the midst of the forest. They were guarded by an immense panther effigy.\*

These caches were simple pits placed near together. There were so many of them that they made the ground unsafe for walking over, for several rods. The caches were on two sides of the stream, the beaver dam between them.

2. The second object was an immense panther effigy. This was situated on the edge of the hill, the tail extending down to the bank of the stream but the head directed toward the entrance to the village. The effigy is a peculiar one; the head is large; the legs clumsy, but the body extremely attenuated; the animal fronted the opening to the village and seemed to be looking directly into the gate way.

3. The gate way, or entrance to the village enclosure, attracted attention. It was composed of mounds about 80 feet long, six feet wide, arranged at such an angle to one another as to guard the opening. [Fig. 138, left end.] The same kind of mounds formed a quasi wall around the village; they were placed at the edge of the hill, at intervals along the whole length of the village plot; turned as the hill turned and thus formed a partial defense to the enclosure. The line does not go entirely around the enclosure but a wide space is left at the rear without any walls or defense of any kind. An effigy of a panther was placed at the opening between two of the long mounds near the north entrance. An effigy of a bird was seen at the opening between the mounds at the other end, and a whole flock of birds were built in effigy on the slope of the hill at this end of the village. A second en-

---

\*See Amer. Antiq. Vol. VI, No. p. 340, fig. 79, also Chap. V of Book on Emblematic Mounds.

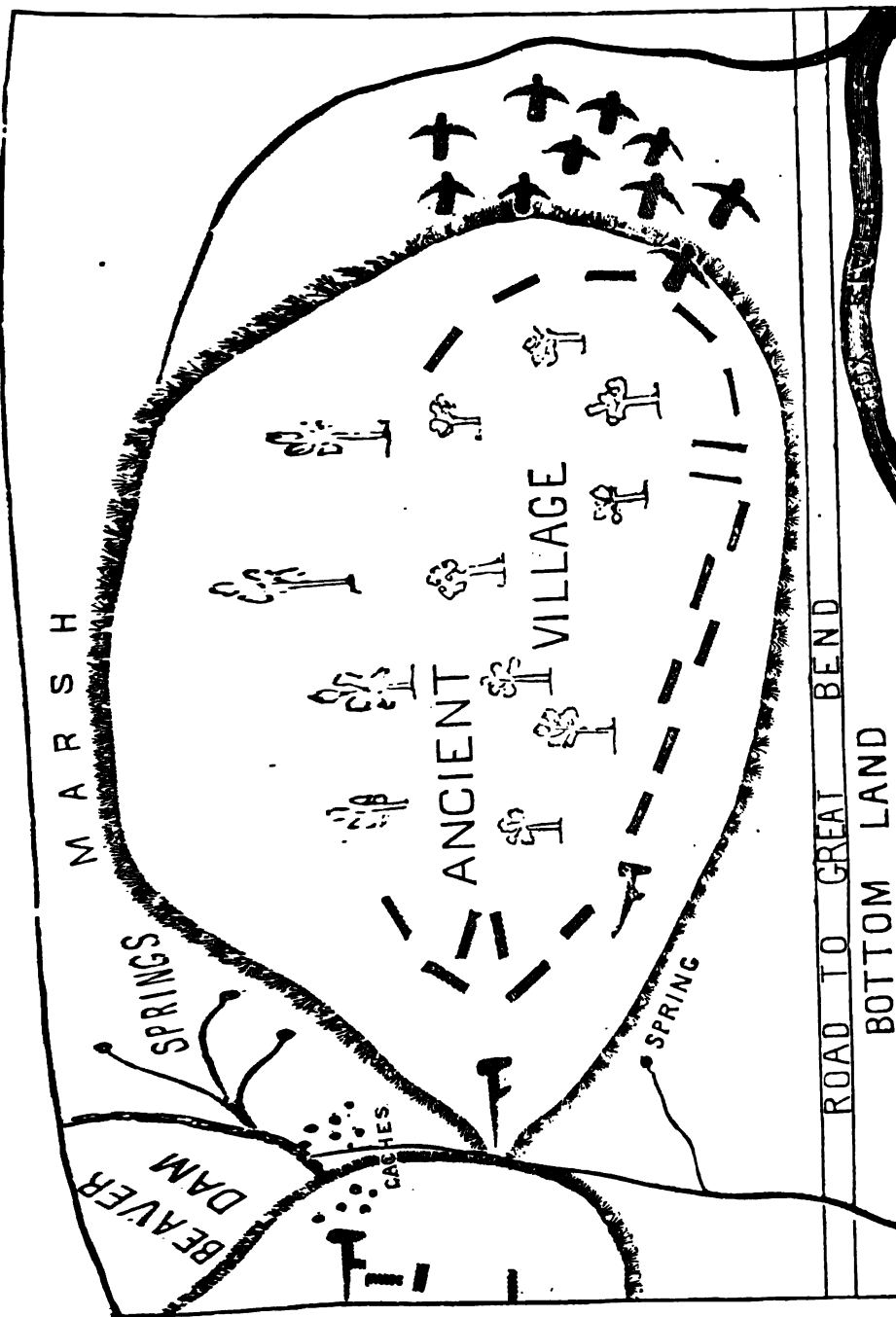


Fig. 138.—MOUND BUILDERS' VILLAGE.



trance was found at the side of the village enclosure near the river. These two entrances are noticeable in that one opens toward the caches and the springs at one end of the village, and the other opens toward the river and the bottom land near the other end. It is probable that a stockade once stood on the outside of the line of long mounds and that these constituted platforms for warriors who might defend the village through loops in the stockades; and at the same time were places of resort for the villagers in the time of peace. They are hardly wide enough for houses to have been erected upon them, though a gentleman accompanying us, drove his buggy upon the top of one of them and allowed the horse and buggy to stand, while we continued the survey of the mounds.

4. The situation of the village impressed us. It was on a rise of ground which was surrounded by low land on all sides; the river on the west, a marsh on the east, spring brooks on the north, and a small creek on the south. The ground sloped in all directions and was dry and well drained. It was covered with a sturdy growth of oak trees and is a very attractive place.

5. Burial mounds and outlooks. Burial Mounds are situated on low ground not far from the village enclosure. A group of mounds, one of them an effigy, was found on the hill top on the side of the river opposite from the village, about a mile distant; and below the hill were two large burial mounds.

This we have called the lookout; the effigy we have called the altar mound. It is of a peculiar shape composed of four conical mounds which make projections resembling legs. Two conical mounds with a ridge connecting them, make the body. The effigy probably represents a frog, at least it bears more resemblance to that than any other animal.\*

One peculiarity of the effigy is that it is an imitation of the shape of the bluff on which it stands; two spurs of the bluff and the projections in the effigy correspond. This double effigy, one natural and the other artificial, shows the superstition of the people who built the mounds. They recognized the resemblance to the animal in the hill and then placed the effigy of the animal, on top of the hill. The altar mound was so situated that it could be seen from a great distance. If there were fires lighted on it, they would gleam, not only upon the waters of the river below, but their light could be seen for many miles away. This may have been the place of sacrifice for the village, or it may have been only a lookout mound; but it was evidently connected with the village and served either for a defense, or a place of religious worship.

6. The game drives deserve special mention. One of these is situated near the bank of the river about a mile from the village. [Sec. 23.] The other is situated on the western edge of the rice

\*See Book on Emblematic Mounds, Chap. VI. Fig. 87.

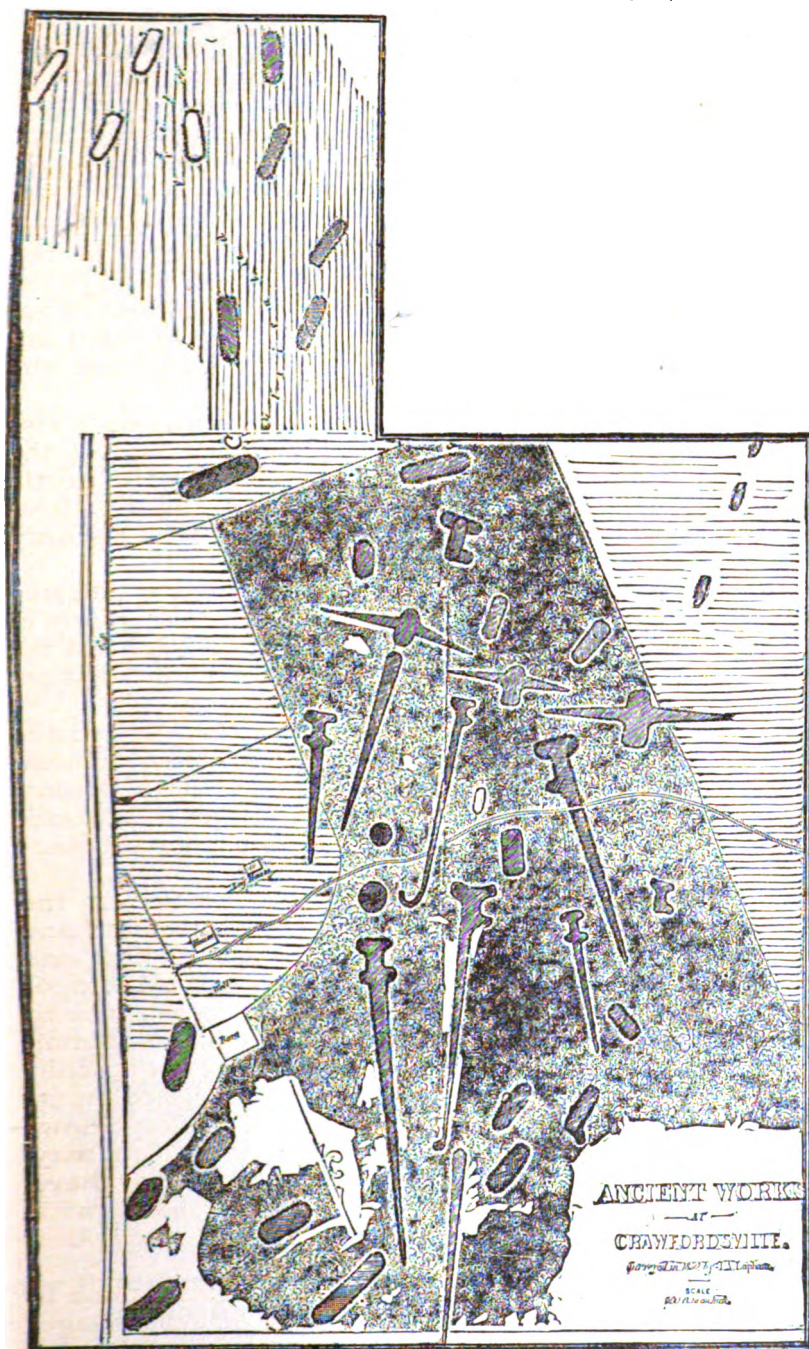


Fig. 139.—GAME DRIVES NEAR GREAT BEND.

swamp. [Sec. 28.] This is a very interesting group. It was plotted by Dr. Lapham and we have drawn from his illustration, and give a picture of it. [See Fig. 139.] It will be noticed that most of the effigies are arranged in lines which run nearly parallel. They consist of panthers and turtles; the tails of both extend to unnatural lengths. Between the effigies are oblong mounds making angles with the bodies and tails; and before the effigies are these bird mounds with their wings extended across the group. Other oblong mounds are scattered about in front of them. The group is at present in a pasture but plowed ground surrounds it on all sides. The reasons for calling the group a game drive are as follows: (a) the situation near the rice swamp and between it and the prairie on a tongue of land and in a place which would be a very natural run-way for deer. (b.) The effigies form narrow passages through which the deer might pass. If there were screens on the mounds the hunters could shoot into the animals without being seen. (c.) A larger high mound is situated near the water's edge, not visible in the cut, which would serve excellently for an observatory by day, or fires might be lighted upon it by night, and the animals attracted by the light.

7 The location of the village with its game drives, altars, burial mounds, and caches, is on an old trail which formerly led from the Indian villages at the mouth of the Milwaukee River, past Muskegon Lake, crossing the Fox River at this point and then leading on to Indian villages at Koshkonong Lake and to others on the Four Lakes. These villages did not belong to the same tribe, for the Pottowatomies were at Milwaukee, the Winnebagoes at Koshkonong and on the Four Lakes. Yet the trail could be seen long after the country was settled. It afterward became the stage route. This trail is laid down in the picture; it crossed the group, when Dr. Lapham surveyed it.

[III.] The Third village to which we shall call attention is the so called ancient city at Aztalan. This is the city which excited so much attention at the time of its discovery. It was said to be the home of the Aztecs and hence the name Aztalan. It is the most celebrated earth work in the state and one of the most celebrated in the United States. It was visited and described before any one knew that there were effigy mounds in Wisconsin and the myth concerning it seems to have been remembered when the emblematic mounds began to be noticed. It was a favorite theory with explorers that the effigies had their heads all directed toward the southwest, as if the animals were in flight toward Mexico. This is a mere fancy, though the course of the streams and the relative situation of the effigies on the banks of the streams do bring the heads of many of the effigies in that direction. The ancient wall at Aztalan was first noticed by the government surveyors, it was afterward described by a traveller from the East. A description by N. F. Hyer also appeared in the Milwaukee *Ad-*

*vertiser*, Jan. 1837. The wall and some of the works inside of the wall were surveyed by Dr. I. A. Lapham in 1850, but it was not at the time ascertained whether the work was an ancient city of the emblematic Mound Builders or not. The opinion has been expressed within a few years that it was the work of a colony of southern Mound Builders. Dr. Cyrus Thomas advocates this theory and speaks of the pyramids as having great resemblance to those found at the South.

In reference to the wall and the works within the wall, it should be said that they resemble modern fortifications more than any other earth works erected by the Mound Builders. They do not resemble the southern earth works in anything except in having pyramids, and these are in contrast, for they are much lower and smaller in every way. The pyramids at the south are some of them 60 and 90 feet high. These are not over 12 feet high. There are works in Tennessee which resemble this ancient city, especially the walled enclosure at Savannah.\*

These have continuous walls with bastions and truncated pyramids as well as inner walls the same as this has. The works in Tennessee have been taken to be fortifications left by the Spaniards under Ferdinand De Soto, but have since proven to be Mound Builder's forts or villages.

In reference to the resemblance of the ancient city to modern fortifications, a few things may be said.

a. It has a continuous wall. b. The wall has projections resembling bastions. c. The wall is thrown out at the corners and ends very much as in modern forts. d. It has an out work consisting of a double wall, which protects one corner of the enclosure. e. It has a double line of walls inside of the enclosure. f. It has platforms at the corners resembling the foundations of block houses. g. It has cellars which might be taken as the places where the houses of the garrison stood. h. It has an excavation inside of the enclosure which might be taken for a well. All of these are very exceptional features in a Mound Builders' village.

We think, however, that we have discovered, notwithstanding all this, that it is an enclosure which belonged to the Emblematic Mound Builders. The writer visited the place in 1849, in company with Prof. J. J. Bushnell of Beloit. Again in 1875 with Mr. Wm. Spoor, and in 1885 with Mr. Porter of Chicago, and Mr. Terry of Lake Mills. The results of our observation are as follows:

1. The wall was made of clay with a mixture of grass and twigs or brush wood; but it was not brick.† The

\*See Sm. Rep. 1870, p. 408.

†Dr. I. A. Lapham thinks that the burning took place after the wall was built, and Dr. J. D. Butler compares it to the burning of Cæsar's forts. See *Antiq. of Wis.*; p. 45.

vegetable fibre has decayed owing to the age of the wall.

2. The bastions,\* so called in the walls are mere projections resembling in some respects the round mounds which are frequently seen strung along a ridge or long mound. Such long mounds or walls have been seen on Mound street in the city of Madison, also at Merrill Springs near Madison, at Batavia, twelve miles east of Prairie du Chien, and several other places. The so called bastions have depressions or sinuses, or possibly the remains of a sloping way, as Dr. Lapham has said. They are about 40 ft. in diameter, 2 to 5 ft. high; and their mean distance apart is 82 feet.

3. The platform or pyramids† are not to be compared to the pyramids of Mexico, or the pyramidal mounds of the Southern States. The height of either of them did not exceed 12 ft. At present they are not over 6 ft. high. The area at the top of one was 53 ft.; of the other 60 by 65 ft. The elevations do resemble the temple mounds of Ohio, especially the platform mounds at Marietta.

4. The so called cellars‡ do not differ materially from the lodges which are common in Missouri, Tennessee, and Minnesota. The huts of the Mound Builders were sometimes placed in a row on raised platforms of earth, so as to be higher than the rest of the enclosure.

5. The so called well is a mere excavation with a ring of earth around it. There is a natural spring within the enclosure, which is at present filled with reeds and marsh grass.

6. The mounds inside of the enclosure were some of them, we think, effigies.|| This we could not be sure of as they have been nearly obliterated; but by taking Dr. Lapham's plat we could restore them and make effigies resembling the serpent, the weasel, and several other animals. Dr. J. W. Phene thought he recognized the serpent in the wall or raised way where the cellars are situated. But the excavations on the hill above are arranged so as to give the serpentine appearance to the ground where they are, and we therefore ascribe these to fancy rather than to any actual or intended figures.

---

\*The wall is 631 feet long at the north end, 700 feet on the south end, 1419 feet on the west side, total length 2750 feet. It is 22 feet wide, and from one to 5 feet high. It is too insignificant to be mistaken for the walls of a fort." "The bastions resemble a simple row of mounds. See *Antiq. of Wis.*, p. 43.

†"The ground descends toward the river abruptly near the western wall. The highest point is at the southwest corner, occupied by a square truncated mound, rising by successive steps; the enclosing walls curve around this. It is further guarded by two outer walls. This was the most sacred place as well as the highest. See *Antiq. of Wis.*, p. 45.

‡"The excavations are not to be confounded with the hiding places or caches. The rings or circles constitute a very peculiar feature and are supposed to be the remains of mud houses. The whole interior of the enclosure appears to have either been excavated, or thrown up into mounds or ridges, the pits or irregular excavations being quite numerous. The want of regularity is opposed to the opinion that they were the cellars of buildings. See *Antiq. of Wis.*, p. 47.

||"We may suppose it to have been a place of worship. There is no guarded opening or gateway into the enclosure. It can only be entered by water or by climbing over the walls. The fort is entirely commanded from the summit of a ridge. The people of Aztalan were a different people from those who erected the animal shaped mounds. This location may possibly have been occupied by a colony of Mexicans. At the time of our survey a crop of wheat was growing on the south part of the enclosure. *Antiq. of Wis.*, pp. 49 and 50.

7. There are effigies near the ancient city.\* One group we discovered in the cemetery a mile north of the village, consisting of three turtle effigies and several burial mounds. A group in the pasture across the road consisted of a turtle, bird, and a very interesting squirrel effigy. Another near a barn belonging to Mr. Boutell, resembles a massive panther. An effigy mound may be seen on the bluff close by the enclosure overlooking it from the other side of the river.

8. There is a lookout mound on a high hill, half a mile north of the cemetery, a mile and a half north from the ancient city. This commands a view of the enclosure with its platforms and lodges. And at the same time presents a prospect over the open valley of the river for several miles north. There are lookout mounds on all the hills surrounding this.

9. Aztalan was a central place. It was once selected for the capitol of the state. It was a place where Indian trails centered. There were formerly Indian villages near it. Lake Koshkonong, Lake Winnebago, the Four Lakes, Fox Lake, Ripley Lake, are all within 40 miles where there were numerous villages. White Lake, or Lake Mills is within 3 miles. Here there are many effigies, and burial mounds. The east shore of the lake is lined with artificial ridges and effigies, which were probably used as screens for hunters. The lake still abounds with duck and wild fowl. An extensive forest, called the Jefferson woods, comes down to the shores of the Crawfish, immediately east of the ancient city. In this forest there are remains of ancient villages which belonged to the Indian tribes and various groups of effigies. This was the forest which Blackhawk sought to reach when he fled before General Atkinson.

There is a mingled wildness and tameness in the region. Savagery and civilization struggle together at the ancient city.‡ The effigies seem ancient, but the walls seem modern. The platforms remind one of barbarism, but the outworks remind us of civilized people. There is a mystery about the place; it differs from all other village enclosures which belong to the emblematic Mound Builders.

10. The scene resembles that which surrounds the works at Newark. An amphitheatre of hills surrounds the place, most of them at a distance of from 1 to 3 miles. The land is rolling, interspersed with valleys and hills which were formerly covered with a growth of massive oak trees. The stream runs through this valley furnishing an interesting feature to the landscape. As we visited the spot and stood on one of the mounds which

\*The map will be given in the next paper.

‡"A number of rusty gunlocks in scattered fragments have been discovered near the surface of the ground, and pieces of iron, copper and brass have been found in the neighborhood."

Several feet below the surface of the large square mound near the northwest corner of the enclosure, was found the remains of cloth enveloping a portion of the human skeleton.

Remains of a skeleton found enclosed by a rude stone wall plastered with clay, and covered with a sort of inverted vase of the same material.

surmount the hill above the village, a storm swept over the scene. The black thunder cloud above, the dark stream below, the hills covered with mingled lights and shades, the forests and fields, presenting a variety of colors, the distant horizon veiled with the falling showers, an occasional flash of lightning with the accompanying thunder, and yet the sun shining as if struggling with the shadows and the storm, it was a scene which impressed the mind as one of rare beauty; but below, near at hand, was the ancient city with its mysterious platforms, walls, and other reminders of a people who have passed away.\*

There came a sense of awe as we looked about. It was easy to imagine that the place was once given to religious assemblies, and that the platforms or pyramids were covered with temples and smoked with sacrificial fires, and to realize that the place was very sacred to the people.

[IV] Another village of the Emblematic Mound-Builders is situated at Green Lake on the east side of the lake, on land belonging to Mr. Hill of the Lake Side House, Sec. 32, T. 16, R. 13 E. This village is nearly obliterated, except that a few of the effigies are left. See map of works at Green Lake. The remains of a stockade wall are still faintly perceptible. It seems to have been a square enclosure with effigies placed near the corners to guard the gateways or openings in the stockade wall. a. One of the effigies seems to have formed a part of the east wall, or at least to have run parallel with the wall. b. The stockade on the west side has projections in it similar to the so-called bastions at Aztalan, though the embankment here is very faint and the bastions are very obscure. c. There are spurs in the embankment which run down to the bank of the lake making a graded way to the waters edge as if to a landing. d. There are four slightly elevated platforms in which pits (resembling those at Aztalan), cellars, as they are called, or lodges more properly, are still seen. e. The heads of the effigies at the north end seem to serve as guards to the entrance, but the tails serve as outworks, which protect the village and the row of lodges on that side. The body of the effigy at the south end with two long mounds, serve as outworks on that side. f. There are landings along the shore north of the village which seem to be guarded by long mounds and effigies. g. The village is remarkable for having many effigies near it. On the hill above is a massive wild goose which seems to be guarding the village. A little farther away is a group of effigies; one of them a turtle just dragging his body up the bank of the creek. Still further on is a group containing two squirrels, a fox, an eagle, a swallow, a panther. h. There are corn hills and a large ring

\*"Here may have been the great annual feasts and sacrifices of a whole nation. The temple, lighted by fires kindled on the great pyramids, and at every projection on the walls, would have presented an imposing spectacle well calculated to impress the minds of the people with awe and solemnity." See *Antiq. of Wis.* p. 50.

the remains of the 1, ring of a council house here, and a dance ground and council house on the hill near the wild goose. The tradition is that this was a favorite resort with the Indians. i. What is still more remarkable, there are effigies on all sides of the lake; the same animal being represented in them that seems to be guarding the village. We should say that the squirrel was the totem of the clan which lived in this village. Squirrel effigies may be seen on all the high bluffs surrounding the lake; A very large and beautiful one on the Sugar Loaf, Sec. 30, T. 16, R. 13. also several on the bluffs west of Norwegian Bay, Sec. 36, T. 16, R. 12. The squirrel is represented in a very great number of attitudes; sometimes with its tail and head erect as if leaping; again, with its long tail curved up as if running, again, with its body bent, its head lifted up, and tail curled down as if standing and listening. The effigies on the west side have their heads very near the brow of the hills, their tails running out at a long distance over the bluff. One has the great length of 600 feet. At the extreme south end of the lake, there is the effigy of a deer in flight, its head erect, legs stretched out as if in rapid motion; Sec. 10, T. 15, R. 12 E. The effigy of a fox on the land adjoining that where the village is, is also very interesting. It is in the attitude which that animal usually assumes; it is very natural and life-like. The fox seems to be prowling about the circle and conveys the idea that the effigy was erected at the time that the council house was standing. The corn-hills are later, for they cover the effigies and have obliterated a part of the circle.

IV. We now turn to the question whether the villages of the Emblematic Mound-Builders were clan residences, and we answer it as follows: 1. The effigies guard the villages in such a way as to give the idea that they were clan emblems. 2. The same effigies, that is, effigies representing the same animals, are frequently found in connection with the game drives in the vicinity of the villages and convey the idea that the clan emblems of the hunters and the effigies of the animals hunted were placed near together in these game drives. 3. Certain effigies are very numerous and are often repeated in certain limited districts conveying the idea that the clans placed their totems on different parts of their territory to show that they were the possessors. 4. The location of lone effigies on isolated and prominent points convey the idea that clan boundaries were marked by them. 5. The general study of the prehistoric map has convinced us that the people were divided into clans; that they placed their emblems on different parts of their territory; that sometimes they placed the same emblems near their villages and sometimes on the hill tops to show the clan boundaries and placed them in groups in such a way as to make a clan record out of them. These conclusions are based upon actual observations and we proceed to describe



the different localities which we visited with these points in mind.

1. We have frequently found effigies surrounding the enclosures and guarding the entrances to them. We have found also that the effigies in the neighborhood were the same as those on the village site. In two cases the effigies were mingled so that it was difficult to tell which one was designed for the village totem or the clan emblem. The wolf and the turtle are associated with eagles at Waukesha; three types. At Great Bend the panther, the turtle, and the prairie hen are associated; the village however, is guarded by a panther. We should say that the panther was the clan emblem here, and the wolf at Waukesha. At Green Lake, the squirrel is evidently the clan emblem. It is more numerous than all the other effigies put together and is more prominent in its situation.

2. This combination of emblems on the same ground is what puzzles the archæologists and makes the problem complicated. It is possible that the dream god was given with the clan emblem.

There are places where animal effigies have this fetichistic character plainly discernible. The dream-god is portrayed in the effigies. Hunters would dream about the animals which they were to hunt. These were called game gods. They would also dream and would imagine that prey gods accompanied them. The buffalo, elk, and deer were game gods. The eagle, the fox, the wolf and the panther were prey gods. These different classes of animals were placed in effigy along with the clan emblem near the game drives. This we think has been proven by our observation. At Beloit there is a game drive where the buffalo is placed near the drive way. The turtle, which is the clan emblem of the region is placed on the hills above the game drive. At another place the panther, as a prey god, was erected near a deer drive and the turtle was used again for the lookout. Near Prairie du Chien the bear was discovered in one or two groups and the buffalo in another group, but both associated with the swallow, which is the clan emblem of that region. The position of the groups on the summit of the hills and the arrangement of the long mounds show that these groups were game drives, but the universal prevalence of the swallow proved that that was the clan emblem. See map of works at Beloit in chapter VII.

3. The analogy can be carried out very easily in connection with the effigies. The writer at one time, accompanied a party from Washington, Dr. Cyrus Thomas among them, in an exploring trip among the mounds near Prairie du Chien. The route taken was along the dividing ridge which separates the Wisconsin from the Kickapoo River where were numerous groups which the writer took to be game drives. At the end of the day's drive the party came down into the bottom land of the Mississippi River and here discovered a series of large platform mounds which the writer believes marked the site of the village.

The groups were as follows:

1. A group of effigies consisting of a swallow and a long mound or ridge on Sec. 35, S. W.  $\frac{1}{4}$ ; T. 8, R. 6, five miles east from the town of Prairie du Chien, in the town of Eastman.

2. A group of four swallows in a line, and one long mound, on Sec. 35, N. E.  $\frac{1}{4}$ , T. 8, R. 6.

3. Group on Sec. 36, N. W.  $\frac{1}{4}$ , T. 8, R. 6, has 3 swallows, 13 long mounds, 7 round mounds, and a buffalo effigy.

4. A single wolf effigy on Sec. 35, N. W.  $\frac{1}{4}$ , T. 8, R. 6, near a spring and an old log tavern, where it is said that Jeff Davis frequently stopped.

5. A group consisting of two bear effigies, one swallow and a long mound on Sec. 24, T. 8, R. 6.

6. A swallow and a long mound with round mounds strung upon it near to the village of Batavia. Sec. 18, T. 8, R. 5.

7. A bear effigy a mile west of Batavia on Sec. 13, T. 8, R. 6.

All of these groups are on the ridge which divides the valley of the Mississippi from the Kickapoo. They are placed at the head of the long coolies or gullies which break down through the bluffs and drain the ridge into the rivers on either side. The effigies are placed just where the animals would be likely to cross the ridge from one valley into the other, and the effigies show what kind of animals they were. In passing down from the ridges to the valley of the Mississippi river, the party discovered a group consisting of two wolf effigies, two long mounds and several obscure effigies nearly obliterated. This was at the mouth of Pickadec coolie, five miles north of Prairie du Chien. Passing still further down the river to the Dousman place, the party came to the group which was said by Dr. J. W. Phene to contain the effigy of a camel, but which has been surveyed and plotted by Mr. T. H. Lewis. The effigies were very obscure. They may have been intended to represent a buffalo and a wolf, but it would be absurd to call either of them a camel. See Figs. 140, 141, 142.

Near the Courliss Bayou, the party came upon a group of large platform or conical mounds arranged at intervals making a large circle around a level plat of ground containing about twenty acres. There were no effigies but the mounds were large enough to be used as platforms, or a place of refuge in the time of high water. It was the impression of the party that these mark the site of the village; and that the mounds were built high and large so as to be places of refuge in time of flood. The so called village was near the water but in plain sight of the coolie on the Dousman place, and could be easily reached from both coolies. The distance from the village to the different game drives is from six to ten miles. If an effigy of the swallow had been found here, there would have been no difficulty in concluding that this was the village which the clan occupied.

4. The discovery of the clan boundaries was the result of

subsequent exploration. One such was found at a point of the bluffs three miles south of Prairie du Chien\*. The swallow was placed in a peculiar situation, on top of the bluff, overlooking a level plat of ground where were several effgies, but too obscure to identify with any particular animal.

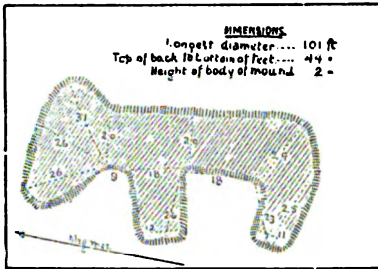


Fig. 140.

There was a conical mound at the very point of the bluff which may have been used as a look-out station or a beacon. The swallow was placed between the beacon mound and the bluff. In its shape it corresponded to the shape of the tongue of land and brought out the resemblance of the ridge to the swallow. Its wings, which were bent, stretched along the narrow knife-like edge of the bluff or ridge, making an elevated but crooked path across; the head and tail bending down the sides of the ridge.

It is a very singular effigy, resembling an ornament embossed on a knife blade, its form being raised above the rocky ridge in distinct outlines. It would seem as if the intention was to make the effigy as striking as possible. A village site was discovered on land belonging to Post-master General Vilas. Here were many large round mounds

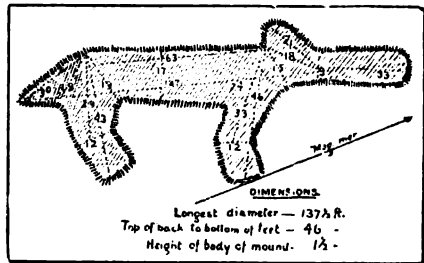


Fig. 141.

situated in long rows around the edge of the second terrace. A single effigy in the shape of a bear was found here but no swallow. The effigy of an elk was found near the river about a mile south of old Fort Crawford nearly obliterated; no swallow was found on the bottom land. It would seem as if the clan had placed their emblem on the bluffs in connection with the game drives, but had either left it out from their village sites

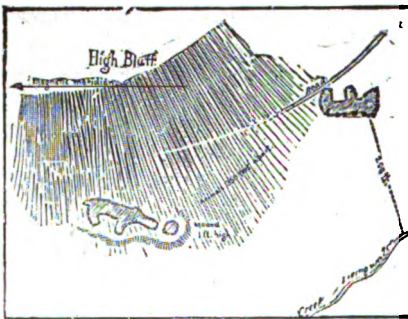


Fig. 142.

or it had been destroyed. The boundary of the clan was, however, discovered.

On the Kickapoo river, five miles north of Wauzeka, a lone

\*Sec. 7, T. 7, R. 5. The cut illustrating this will be given in a future number.

swallow\* was found situated on a high, slightly bluff where a view could be had of all the region which had been traversed by the party a few days before. Though the game drives and effigies were not visible at this distance; yet the village of Batavia and the farm houses on the ridge were plainly to be seen. The route traversed to reach this lonely spot was by way of the Wisconsin and Kickapoo rivers over a very rough country; the distance was nearly thirty miles, though across from the bluff to the ridge was perhaps about five. The situation of this effigy on the height of ground overlooking the surrounding country, conveyed the idea that it was placed there to mark the boundary line of the clan. It was on the east side of the river, but no effigy like it was found farther east. A swallow effigy was, however, found two miles further north.† This was on the banks of the river in a lonely valley where was a single log hut in a little clearing. The place was surrounded by steep hills and was difficult of access. The swallow was on a plat of sandy ground around which the river made a bend. It would seem as if the effigy was placed here so as to show that the river was occupied by this clan. The impression formed after visiting the different groups was that the whole region embraced within Crawford County, with its precipitous bluffs and coolies, with the prairie where the city of Prairie du Chien now stands, bounded by three rivers, the Kickapoo, Wisconsin, and the Mississippi belonged to the swallow clan.

5. The clan record has not often been found in connection with village sites, but the fact that there are boundary lines beyond which the emblems are seen, would indicate that villages and clan residences were identical. This work of tracing out the emblem of the different clans has not yet been finished, yet there is a predominance to certain effigies in certain districts, which confirms the impression. ‡In Grant Co. the abode of a clan was found situated near the Mississippi river on the terrace just above high-water mark. The land surrounding it was frequently flooded but the particular spot was chosen because of its height. No effigy was seen here. It is, however, only a mile or two north of the so-called elephant mound. The bottom land in this region is frequently broken by swails. The streams which flow down towards the river from the high bluffs adjoining have plowed these wide furrows through the sandy soil leaving the beds lower than the common level. In these swails or dry

\*On Sec. 6, N. E.  $\frac{1}{4}$ , T. 7, R. 4, W., on land belonging to Wm. Coolie; length of body 59 ft., head 14 ft., wing, to first joint 25 ft., second joint 46 ft., spread from tip to tip 136 ft.; from angle of wing to head 29 ft. Mounds were discovered at the mouth of the Kickapoo river in village of Waukega.

†On Sec. 17, T. 8, R. 4, W., Marietta Township. Land belonging to Wm. Posey. Length of the effigy: body, 54 ft., head 27 ft., right wing 100 ft., left wing 95 ft.; spread between the tip of the wing, 160 ft.

‡On the Bagley place, three miles south of Wyalusing. It consists of 15 round mounds similar to those in the Courliiss group. Another group of long mounds with round mounds interspersed on Settlevich's place just south of Bagley's place. Several long mounds with round mounds on Harris' place.

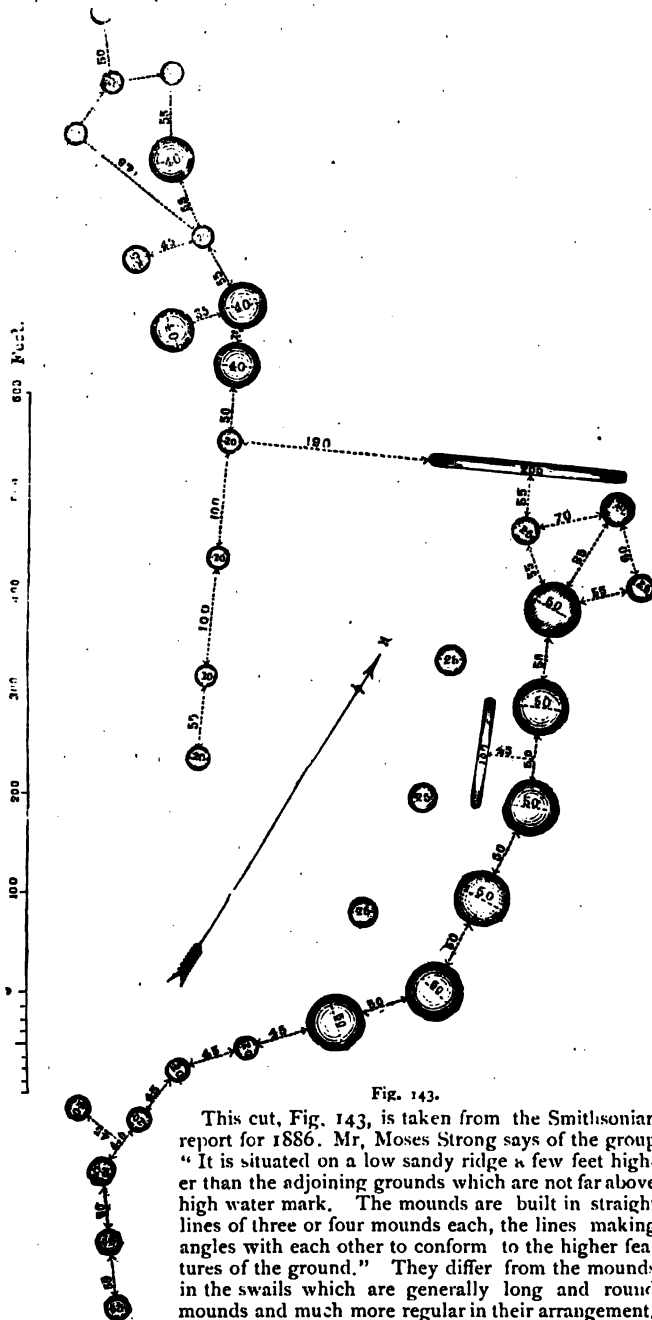


Fig. 143.

This cut, Fig. 143, is taken from the Smithsonian report for 1886. Mr. Moses Strong says of the group "It is situated on a low sandy ridge a few feet higher than the adjoining grounds which are not far above high water mark. The mounds are built in straight lines of three or four mounds each, the lines making angles with each other to conform to the higher features of the ground." They differ from the mounds in the swails which are generally long and round mounds and much more regular in their arrangement.

beds are numerous groups of mounds, some of them composed of long and round mounds which run in rows parallel with the sides of the swails, and some of them composed of effigies. The effigy of the elephant and the accompanying effigy of a bird is in one of these low swails. These groups of effigies are all of them so much below the common level that they cannot be seen until one comes upon them. The impression conveyed is that they were game drives placed in these long swails or dry beds because they were the natural runways for wild game which came down from the bluffs to the river bank. Such was the probable object of the group where the mastodon was. The massive eagle stretched its wings nearly across from one side of the swail to the other, and would make an excellent screen for hunters. On the summit of the precipitous bluff above many effigies have been seen by the writer.\* They are in long lines. They run from one end of the rocky spur to the other, making a quasi wall parallel with the river and crowning the face of the bluff. Others run in long lines from the edge of the precipice back to the highlands. The whole region is cut up into gorges and narrow tortuous ridges. On the summit of these rocky heights, these rows of long mounds and effigies are frequently seen. Wherever a view can be gained of either the river, or the surrounding country, lookout mounds are placed. They seem to have been designed for roadways on which sentinels could run: and yet they were broken by openings. Their object may have been for screens, behind which hunters could hide as they watched the bear and other wild game climb up the precipice and down again to the valley of the river. Whatever their object was they form a complete net work which not only covers the bluffs and highlands but extends to the bottom lands and swails, and encloses the land in its meshes. Some of the lines run three or four miles. There are interspersed between the long mounds, effigies of elk, bear, buffalo, and in one case a squirrel. These effigies are all of them in very striking attitudes; the elk with horns projecting as if in attitude of attack; the squirrel with body and tail curved as if running. Buffaloes also seemed to be standing on the edge of the bluffs looking down the deep coolies. An owl was stationed on a high point where a distant view could be gained. A coon was seen straddling a very narrow pass on the top of a rocky precipice, its body and tail forming a pathway and its legs hanging down on either side resting against the edge of the precipice.† The buffalo effigy could be traced here to be

\*Group on bluff overlooking Wyalusing, on Kendall's place, S. E.  $\frac{1}{4}$  Sec. 31, consisting of squirrel and 4 long mounds. A line runs back from this consisting of 9 long mounds, and ends in a group consisting of buffalo, wildcat and the owl.

†On Derby's place.—A line nearly a mile long runs from Derby's place to Glenn's place, N. E.  $\frac{1}{4}$  of Sec. 30, T. 6, R. 6, W.; consisting of long mounds, and two buffalo effigies. Another line described by Moses M. Strong on the Hayfield place: This is nearly a mile long; it consists of an elk effigy, 2 bears, and long mounds. A group overlooking Bridgport in one direction and Prairie du Chien in the other has been discovered by the writer on Goss' place. The long mounds run from the edge of the bluff overlooking the Wisconsin, back 1,000 ft. and end with a turtle effigy, which probably served as an outlook.



## † EYAY SHAH: A SACRIFICIAL STONE NEAR ST. PAUL.

The ancient altar now described gives its name to one of the earliest landings on the upper Mississippi, about six miles below the present city of St. Paul. Formerly there was a flourishing mission here among the Sioux, or Dakotahs, sustained originally by the Methodists and at a later day by the Presbyterians. The ground is now occupied by camp-meetings by the former denomination. Red Rock, the name of the landing, is merely a translation of Eyay Shah. It may be mentioned incidentally, that the Jesuit missionaries, who had already located at St. Peter's, desiring another mission as near to the Fort Snelling reservation as they could get, planted a chapel on the bluff overlooking Red Rock, Kaposia and Pig's Eye, and gave it the name of St. Paul's; hence the origin of the name now borne by the beautiful city at the head of navigation on the Mississippi river.

It is a well-known custom among the Dakotahs, Omahas, and some other tribes, to worship the bowlders that lie scattered among the hills and valleys. They regard them as objects of special veneration and peculiarly mysterious. When any one of them was in perplexity or peril, he would clear a spot from the grass or brush that might be in the way, then roll a bowlder upon it, streak it with paint, deck it with feathers and flowers; after which he would pray to it for needed help.

Usually, when a stone had thus served its purpose, it was no longer regarded as a sacred object, but might be disposed of in any way that suited the savage whim. But the peculiarity of the sacrificial stone now described is that, according to the testimony of Rev. Chauncey Hobart, and other pioneer missionaries, it was a shrine to which pilgrimages were made from generation to generation and where offerings were laid, at least, semi-annually.

Eyay Shah, or Red Rock, is the same term by which the Indians designate Catlinite, or the red pipe-clay. The stone in question, however, is, as I found on examination, an extremely hard specimen of hornblende-biotite-granite, quite symmetrical in shape, about five feet long, and three feet in its greatest width, and not naturally red, but made so artificially. The Indians also called it "Waukan," i. e. "A Mystery," and indulged in strange speculations as to its origin. It lies on a weathered ledge of limestone, and evidently has not been moved since it was left there by the ancient forces that brought it down as a trophy from some granitic range. But the Dakotahs looked no farther than to an adjacent hill, about two miles distant, down whose sides, as they said, they could trace the path, along which, self-impelled, it had rolled to the bank.



The particular clan of Dakotahs that claimed this rude altar was known as the Mendewacantons; although it was to some extent resorted to by the Kaposias, and possibly other clans. The hunting grounds of the Mendewacantons lay up the St. Croix river; and invariably before starting on an expedition they would visit Eyay Shah and leave an offering of gayly painted feathers, or a duck, or a goose, or a portion of venison, and after a few simple ceremonies go on their way. But twice a year the clan would meet more formally, on purpose to paint the stone, which they did with vermilion, or as some say, occasionally with the blood of their enemies, which had been saved up for that purpose. When the painting was done, they would trim the boulder with flowers, feathers and other ornaments, and dance around it before sunrise, with many chants and prayers for success from the spirit of the mysterious rock.

The last occasion on which they are known to have thus visited Eyay Shah, was in 1862, just prior to the terrible massacre that occurred in August of that year, and which is a matter of history. Since that date, however, the stripes of red paint have been renewed; the last coat having been applied as recently as 1883—although my suspicions are that this was done by white men desirous of perpetuating the interesting features of this ancient object of worship. Others, with an iconoclastic spirit, have drilled a hole in one side, for the evident purpose of putting in a blast by which the grim idol should be destroyed.

I counted the stripes encircling the rugged rock, and found them twelve in number; each being about two inches wide, and the intervening spaces being from two to six inches in width. By the compass Eyay Shah lies exactly north and south. It is located exactly twelve paces from the present river bank. The north end is ornamented by a design representing the Sun—a rudely drawn face surrounded by fifteen rays. These markings are interesting, because if not actually made in their present condition by the Indians, they were plainly meant to reproduce and perpetuate their original work.

H. C. HOVEY, D. D.

## Correspondence.

## THE RELICS OF THE IROQUOIS.

*Editor Am. Antiquarian:*

Since writing my article on the totems of the Iroquois I have received a letter from Miss Susan Fenimore Cooper, who says, in correction of her first statement, "An error occurs in a recent paper of this series, regarding the totems of the Oneidas. Originally, throughout the Iroquois tribes, there were but three totems or bands, the Turtle, the Wolf, and the Bear. At a later period other bands were formed, under the leadership of prominent warriors, and these assumed names or totems of their own, making the number up to eight. These younger bands were called "Pine Trees" that grew of themselves, and could not boast of the same antiquity as the original three."

This is still hardly an exact statement. About the same time, I received another note from the Rev. E. A. Goodnough, to whom I had sent my views, as well as my article on the Iroquois clans. He says, "My interpreter's idea is the same as yours. He says the "Pine Tree that grew of itself" is the name of a chief who never was chosen to be a chief, but became one by his own ability as a speaker and leader, or business capacity, drawing followers from all the other bands."

This is quite likely, and it is interesting to find these evidences of natural change in a nation where none had been supposed to have occurred.

I made two contributions at the meeting at Buffalo. One on wampum, showing that it was unknown in the N. Y. Iroquois country before the Dutch colonization; its manufacture and rapid increase; its use by the Dutch as money; its use in treaties by the Iroquois rather than by the shore tribes; examples of emblematic belts, their large number and increasing size, and various customs belonging to these and to strings of beads.

Since then I have had ample opportunities for examining the Onondaga wampum belts, and have demonstrated their modern character, a conviction of which has grown upon me fast, with a study of the subject; modern thread is used in all.

I think my position cannot be disproved. It is essentially this:—that the territory of the N. Y. Iroquois had never been occupied by the Algonquins,—the grooved stone axes being rare in any Huron Iroquois territory; that the Iroquois came from the north and west and had not reached the sea, there being no prehistoric shell beads or ornaments on their sites; that they came from at least three

sources, as the Mohawks from the St. Lawrence, the Onondagas from the east end of L. Ontario, and the Senecas from the Eries in West New York; that tradition, history and archæology show their present nationalities were established in the latter part of the 16th century; and that their previous separate nationalities and residence elsewhere gave ample time for the growth of clans, customs and dialects. The totems of the nations and our knowledge of their sites show that the League could not have been established much before A. D. 1600.

A prehistoric burial ground has been opened here, and 17 skeletons have been taken out, at this time. They were mostly adults, as I saw but one child among them. One was in a sitting posture, but most lay horizontally. The soil was a yellow sandy loam, and there were no relics with them, but under almost every one was a small pebble, an inch or more long. I measured ten skulls, with the following results in horizontal circumference:  $18\frac{1}{2}$ , 19, 19,  $19\frac{1}{2}$ ,  $19\frac{1}{2}$ ,  $19\frac{3}{4}$ ,  $19\frac{3}{4}$ , 20, 20,  $20\frac{1}{2}$ .—Although there were no marks of violence, the leg bones of some were wanting, especially of the thighs. The number of skeletons found here at different times seemed large for the adjoining village site.

I recently visited W. M. Adams, of Mapleton, Cayuga Co., N. Y. His relics are mostly of the historic period, and he has a large number of articles of European manufacture. His collection of catlinite ornaments is very fine; the largest and best I have anywhere seen. These, of course, are within a period of about 200 years.

A large number of stone articles seem quite recent. Polished celts, hammer stones, etc., are yet found here on sites occupied within the last two centuries, and on such spots I have collected some myself. Some of our finest clay and stone pipes have come from graves that are no older, and our antiquarians are forced to give up any great age for the occupation of this region, though all have commenced with ideas of a mysterious past. However, we still have prehistoric sites and articles which do not belong to one people alone.

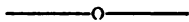
Our local antiquarians have been compelled to come down from a mysterious past, to what is historically a living present. It was my misfortune to disagree with Drs. Hale and Brinton at the last meeting of the A. A. A. S. who think that the Iroquois Book of Rites dates back to a very early date.

There is a feeling of impatience, sometimes, when a clergyman argues for a low antiquity where others want ages but it makes a local archæologist, accustomed to field work, smile, when Dr. Hale mildly suggests that a thousand years is none too much for the Iroquois occupation of Central New York.

In your article on pipes, you insert Fig. 4 from a drawing of mine, which has been made to appear rough in engraving. It is really of finely polished slate. You will find my opinion of it in my article on Indian Pipes, p. 328. It is a genuine find, but undoubtedly made with iron tools. The general idea may be that of

a woodpecker, as it seems, but it has a veritable *cock's comb*. The French brought domestic fowls to Onondaga county in 1656, within a dozen miles of the place where this was found.—I figured one found here, over ten years ago, of which I enclose an outline. It is of olive green slate and well finished; the work like the other, Fig. 188 of Smith. Arch. Coll., is of the same type from New York, and I think it a rare *local* form. In Fig. 189 the hole beneath unites the forms, and Prof. Rau says that the type is still made. In these, as I mentioned, the face is turned *from* the smoker, the common rule in Indian pipes of the last two centuries. Most earlier examples have the face the other way, and I noted a curious specimen of the transition period in which it is turned to one side. Of course these figures are conventionalized, and in this bird pipe the cock's tail could not well be given, but I think no ornithologist would class it as a woodpecker in looking at the thick bill and comb, though the attitude might suggest it.

W. M. BEAUCHAMP.



## MOUND CONTAINING WROUGHT IRON NAIL AND BRASS BUCKLE.

*Editor Am. Antiquarian:*

Monday, Nov. 8th, I made an important archæological discovery five miles above Washburn, about two miles from the Southwestern end of Chequamegon Bay, near Mr. Wyman's place. He showed me two mounds, one of which we dug up a little and examined. The mound was about eight feet in diameter at the base and two feet high and almost entirely covered with a layer of boulders or stones, taken from the beach near by. After removing some of the boulders and clay we came upon a layer of ashes from four to six inches thick. In the ashes we found a long iron nail of wrought iron, hand made and bent, as if it had been clinched when driven into a board; it resembled somewhat a hook and was about  $2\frac{1}{2}$  inches long. It tapered down to a sharp point and the head was hammered rough. It was a regular old fashioned nail and was undoubtedly the work of civilized men, of whites. Besides we found part of brass buckle, very artistically made, perhaps the shoe-buckle of some old French officer. Both objects had suffered from the fire. Besides we find what seemed to be a piece of a clay-pipe stem, and pieces of bones of birds, fishes and animals. What do you think was this mound? It was not an Indian mound, for the objects found were decidedly of European make. It is located not far from the site of the ancient Jesuit Mission at the head of Chequamegon Bay. Near by can be seen three small holes, where the dirt was taken out, that covered the mound. It is at the very edge of a point of land, and in a few years will disappear as the bank will cave in and destroy it. I think it would pay to have it entirely uncovered and examined. Perhaps some other relics of the 17th century might be found there.

These relics prove conclusively the existence of white men at our bay long, long ago perhaps two centuries or more. I have kept these objects and will show them to you. There is another mound near Wyman's house, which has not been examined yet, except that he threw away some of the stones and leveled the ground somewhat.

J. CHRYSOSTOM VERWYST, O. L. H.

## BOOKS ON MYTHS AND MYTHOLOGY.

*Editor Am. Antiquarian:*

Enclosed please find a list of books on Myths and Mythology, in the English language, which I hope may prove satisfactory to you. I was unable to find many on *Indian* myths and mythology. Should you wish the titles of similar works in foreign languages, such as the works of Dr. Krauss of Vienna, please let me know.

The following is a list of English works in the Libraries of the Bureau of Ethnology and The Scottish Rite Masons, Washington, D. C.

Caballero (Fernan.) Bird of Truth, and other Fairy Tales. 241 pp. London, no date. (From the Spanish. The author is a lady, whose real name is not given.)

Callaway (Rev. Canon, M. D.) Nursery Tales, Traditions, and Histories of the Zulus. Vol. I, 375 pp. London, 1868.

Coelho. Tales of Old Lusitania. Transl. by Henriqueta Monteiro. London, 1885. 190 pp. (From the Folk-lore of Portugal.)

Comparetti (Domenico.) Researches respecting the Book of Sindibad. 124 pp. London, 1882.

Crane (Thos. Fredk.) Italian Popular Tales. Boston and N. Y., 1885. 389 pp.

Dasent (G. W.) Tales from the Fjeld. (From the Norse of Asbjørnsen.) London, 1874. 375 pp.

Day (Rev. Lal Behari.) Folk-tales of Bengal. London, 1883. 284 pp.

Early ideas—a group of Hindoo Stories, by an Aryan. London, 1881. 158 pp.

Fairy Legends and Traditions of the South of Ireland. London, 1828. Vol. I, 363 pp. Vol. II, 326 pp.

Fausbøll (V.) Buddhist Birth Stories, or Jataka Tales. Transl. by T. W. Rhys Davids. Boston, 1880. Vol. I, 346 pp.

Fiske (John.) Myths and Myth-makers. 8th. ed. Boston and N. Y., 1886. 251 pp.

Folkard (Richard, Jr.) Plant Lore, Legends, and Lyrics. London, 1884. 610 pp.

Friend (Rev. Hilderic.) Flowers and Flower Lore. 2d. ed. London, 1884. 704 pp.

Geldart (Rev. E. M.) Folk-lore of Modern Greece. London, 1884. 190 pp.

Gentleman's Magazine Library—Edited by George Laurence

Gomme. English Traditional Lore, and Customs of Foreign Countries and Peoples. Boston, 1885. 356 pp.

Giles (Herbert A.) Strange Stories from a Chinese Studio. London, 1880. Vol. I, 432 pp. Vol. II, 403 pp.

Gill (Rev. Wm. W.) Myths and Songs from the South Pacific. London, 1876. 328 pp.

Gordon (H. L.) Legends of the North-west. St. Paul, 1881. 143 pp.

Hapgood (Isabel Florence.) Epic Songs of Russia. N. Y., 1886. 358 pp.

Harley (Rev. T.) Moon-lore. London, 1885. 296 pp.

Leland (Chas. G.) Algonquin Legends of New England. Boston, 1884. 379 pp.

Mijatovics (Madame Csedomille.) Serbian Folk-lore. Ed. by Rev. W. Denton. London, 1874. 316 pp.

Mitford (A. B.) Tales of Old Japan. 3d. ed. London, 1876. 383 pp.

Monteiro (Mariana.) Legends and Popular Tales of the Basque people. N. Y., 1887. 274 pp.

Morell (Sir Charles.) Tales of the Genii. From the Persian. London, 1820. Vol. I, 334 pp. II, 334 pp.

Ralston (W. R. S.) Russian Folk-tales. N. Y., no date. 388 pp.

Sagas from the Far East; or, Kalmouk and Mongolian Traditional Tales. London, Griffith and Farran, 1873. 420 pp.

Schoolcraft (H. R.) The Myth of Hiawatha and other oral legends. Philadelphia, 1856. 343 pp. (See an edition by Columbus Matthews, entitled "The Enchanted Moccasins, and other tales" from Schoolcraft.)

Sheykh-Zada. History of the Forty Vezirs, or the Story of the Forty Morns and Eves. Transl. from the Turkish by E. J. W. Gibb. London, 1886. 420 pp.

Stephens (Geo.) and Cavallius [H.] Old Norse Fairy Tales. [From Swedish folk.] London, no date. 246 pp.

Temple [Capt. R. C.] Legends of the Panjâb. Bombay and London, no date. Vol. I, 546 pp. II, 580 pp. [Probably after 1884.]

Vernaleken [Theodor.] In the Land of Marvels. Folk-tales from Austria and Bohemia. London, 1884. 363 pp.

Von Schiefner [F. Anton.] Tibetan Tales. Transl. by W. R. S. Ralston. London, 1882. 368 pp.

Wagner [Dr. W.] and Macdowall [M. W.] Epics and Romances of the Middle Ages. 2d. ed. London, 1884. [Over 250 pp.]

Westall [Wm.] Tales and Traditions of Switzerland. London, 1882. 344 pp.

There are various works on Folk-lore and Mythology in foreign languages, besides several Scandinavian Sagas, and publications of Folk-lore Societies, which are not given in the above list.

J. OWEN DORSEY.

Box 591, Washington, D. C., Nov. 29, 1886.

## GOLD AND BRONZE RELICS, AND GUAYMI INDIANS.

*Editor Am. Antiquarian:*

While attending the meeting of the A. A. A. S. at Buffalo in August I was presented with No. 4, Vol. VIII of your excellent journal, the "American Antiquarian." Having been abroad with the exception of a few months at long intervals, for the past 18 years, I have been prevented from becoming acquainted with your journal heretofore.

This long absence being spent among a semi-civilized people I doubt somewhat my ability to properly use my own language. But with this excuse; and feeling impelled by no unfriendly motive I wish to offer a few remarks on Dr. D. G. Brinton's "Notes on American Ethnology," paragraph 5, page 251, "Guaymi Indians."

The "Guaymi Indians" are a branch of the Culantro tribe, as is well known by those who have been among them long enough to learn the fact. That these Indians possess a few of the unmistakably ancient gold and bronze figures proves nothing, as most Indians are well acquainted with the fact, that they may be found by digging among the ancient cemeteries. And it some times occurs that they find them while digging for the roots of Sarsaparilla. I have purchased some; which the Indians told me they had discovered in that way. For eight years among these people, specially engaged in the collection of the works of an unknown race, with whatever preconceived notions I may have entertained; I have only sought for facts in relation to their history. Let it lead to such conclusions as it may.

I have neither time nor space to state the evidence I have gathered that none of the present Indian races, know, even by tradition, as much about the artisans who wrought these strange figures in gold, copper and bronze as we do today. They do not wear them; nor will they use the pottery or stone implements of the ancients. Even the semi-civilized inhabitants of the coast, are reluctant to use the ancient grinding stones which are found in connection with these cemeteries, though admirably adapted to their use.

The writer met Mr. Pinart in Panama and in Chiriqui several times during his short stay in Chiriqui, and endeavored to aid him with such knowledge of interesting objects as I thought he would like to visit. But as he, at the time, was in the employ of the Panama Canal Co. he could visit but few, and those but briefly. That he has done some good work, I have no disposition to deny.

We venture to say, there is scarcely a frontier settlement of our own country from whose inhabitants we can get sufficient information to form any thing like a correct theory regarding the age or other matters relating to the mounds or their builders. It is immeasurably more difficult in a hasty visit of a few days among an

uncivilized and suspicious race, who are never known to speak the truth until prevarication and falsehood has first been tried.

The aborigines of Chiriqui, date far enough back to remember the perfidy of their Spanish conquerors, and are, to say the least, very reticent in the use of truth.

They evade a direct answer until they first try a falsehood, though often much to their disadvantage. Thus it may be seen how difficult it is to get at *facts*, in a hurried way, when we must rely upon such means of information. It seems far better to take more time and let leak out spontaneously what they know as we have an opportunity to see and hear. Then we will come to the conclusion that the present Indian race of Chiriqui is far inferior to the extinct race who fashioned the works of art which lie buried beneath their feet.

It is difficult to believe, these Indians would make gold ornaments, and be willing to sell them for less than the gold they contained is worth.

J. A. McNIEL.

Binghampton, N. Y., Sept. 25th, 1886.

---

## MODERN MOUND BURIAL.

*Editor Am. Antiquarian:*

In answer to your inquiry about the mound on the bluff near this place, which was recently opened, I would say that it was 58 paces in circumference, the height on the lowest side about 10 ft., on the highest side, 12 ft., it being on a slope. There was no regular stone vault, but stones were laid which supported pieces of timber; stones at the bottom, timbers on the stones, and sticks and barks over the remains. I should think that the space where the bones lay was about 5 by 7 ft. The chambers at the end were caused by the projection of the pieces of wood. There were three heads in pretty good condition when first taken out, and several others that were not. I supposed they were in a sitting posture, because the heads were on top of pelvic bones and femurs. The cup and broken crockery were rather in north of west corner of the vault. There was not much pottery—not more than a double handful, and I do not think the largest piece was more than an inch in size. The west end, which was the lowest side, did contain a chocolate colored dust with a sickening, offensive odor.

The covering above the wood and bark was, I should think, a mortar made from the soil, similar to the other mounds I have seen opened. It was quite hard. I have no written memoranda of the case but give from memory only.

Yours Respectfully,

AUG. CAMPBELL.

East Dubuque.

[This is probably the mound described by Dr. Cyrus Thomas. See Am. Antiq. Vol. 4, No. 4.—Ed.]



## A FRAGMENT OF SHAWNEE HISTORY.

*Editor Am. Antiquarian:*

The most ancient tradition still extant among the Choctaws of Mississippi in regard to their wars with other tribes is perhaps the tradition of the Shawnee war. This tradition briefly states that the Choctaw people were suddenly surprised by the inroad of large bands of Shawnee warriors who attempted to take possession of their hunting grounds. The Shawnees are described as being a people of almost gigantic stature. A long and terrible war ensued, resulting finally in the Choctaws expelling the invaders and driving them northward. The time of this war was doubtless at some period in the seventeenth century when the Shawnees lived in the Cumberland valley. The Shawnees never afterwards made war upon a Southern tribe.

H. S. HALBERT.

Crawford, Mississippi, May, 6, 1886.

## MOUNDS ON THE UPPER WISCONSIN.

*Editor Am. Antiquarian:*

Your letter making inquiry in relation to mounds on the Upper Wisconsin is received. So far as I know, mounds are of very rare occurrence at any points north of this in the Wisconsin valley. I have never seen any in my frequent trips and the instances reported are, I think, somewhat doubtful. Below this point on the banks of the Wisconsin they are not infrequent, though many have no doubt been obliterated by changes the surface has undergone through various improvements. Now and then I strike an "old settler" who can give much information in regard to some that have been opened and what were their contents. I have a few rough spear heads that were taken from one of the mounds in this city. At an early day there were a number of mounds within the present city limits but they have been destroyed.

A. G. SHUB.

Wausau, August 6, 1886.

## OLD FORTS AT THE WEST.

*Editor Am. Antiquarian:*

I think you said something in your former letter about locating the early forts in the west. I know nothing in western studies which is more needed, and would be more useful. Let a list be made out and passed round for identifications and additions, and corrections.

W. A. POOLE.

Chicago, Ill.

## SERPENT SYMBOLISM IN ASIA AND AMERICA.

*Editor Am. Antiquarian:*

Your first paper on "Serpent Symbolism" interested me very much. Some of your examples resemble strikingly those on the so-called Stones of Miceany, from Babylon. If you have Rev. G. Rawlinson's "Five Monarchies," Ind. Edit. and Vol. II., see two views of these stones, pp. 573, 574, what is said.

These inscribed conical stones were land-marks. The astronomical position, the conical, appears to represent the extreme northern heavens, including space itself. Some early tradition may be embodied here; and the conical stone itself was possibly derived from the traditional Mount of Paradise, where all geographical, if not also land divisions were supposed to center. This would be a good hint for Dr. Warren. We have corresponded some, and he honors me by often citing me from the Bib. and Oriental Journal. It is difficult for me to adopt his theory, however.

Respectfully Yours,

O. D. MILLER.



## CONJECTURES ABOUT THE MOUND-BUILDERS.

*Editor Am. Antiquarian:*

Although I was born in the vicinity of the Oneida tribe, now at Green Bay, I never took pains with their history, etc., till after they had sold their last reservation, now the land of the Oneida Community. I of course knew the Oneidas at least, the Chief Skanadant, and have seen the "Long House" where the Onondagas were, and I believe still are. I have also visited the Shinnerecks on Long Island. They are mostly negroes, yet I found them having Indian traditions. I think, too, that there are Pequods still in Connecticut.

I doubt, however, the existence of "Indians" here till after their migration from near the Mississippi. I favor the notion that when the Northmen visited this region, the Skrallings or progenitors of the Eskimos held the country. These notions, however, are of no value to you.

My own tastes are historic. I have a taste for ancient history, and the explanation of worships. I desire to know the character of the American Serpent-Worship, the legends of the various peoples, and I oscillate between the conjectures that the wild tribes are Asiatic or indigenous. The peculiar customs and worships of the two continents are so alike, and yet so unlike, that it gives a pretty wide field for the fancy.

I have conjectured that the Mound-Builders were the ancestors of the Toltecs of Mexico; that the various wild tribes drove them from the Upper Mississippi, and then themselves divided into peoples. Whether these tribes were the vagrant Scyths is an open question; many of their customs, like scalping, totemism, conjuration, sham-

anism, as Preller would call it, seem to indicate it. They appear much like Tartars, and I have seen them with the Mongolian eyes.

Whether stray names like *Votar* for *Woder*, *Atlan*, etc., amount to much as evidence I seriously question. I am not much of an "Evolutionist," yet I suppose much of the Biblical narration to be allegoric rather than historic. Doubtless the races of men are infinitely older than we suppose, and diverse in their origin. I doubt not that if they all were to perish, there would come peculiar mundane conditions, which would be followed by the appearance of a new human race.

Yours truly,

ALEXANDER WILDER, M. D.

### INDIAN VILLAGES IN MASSACHUSETTS.

*Editor Am. Antiquarian:*

We have in this town no effigy mounds. One of the finest Indian camping grounds was in the north corner of this town, near the source of the river. Several acres of warm white sand on which the snow rarely remains, and with a southern exposure, was the favorite Indian camp hereabouts. The Herrings and the Alewives came up here every spring. Many arrows, etc., were found. Later on, this was the location of the famous Christian tribe of Indians under the great chief Oramog. Here were some of the Wamesit or Lowell tribe.

The location of two Indian burial grounds in town are well known; one on North street, and the other in the west part of the town.

The subscriber has a very small private collection of Indian relics, and Dea. D. B. Goodale, of Marlboro, a much larger collection. This town was totally destroyed by the Indian torch in 1675-6 under King Phillip.

STILLMAN B. PRATT,

Marlboro, Mass. Nov. 24, 1886.

### WINCHELL ON QUARTZ IMPLEMENTS.

*Editor Am. Antiquarian:*

In regard to the Little Falls quartz chips, I remain in about the same condition of doubt as when I wrote my account of them in 1877. I visited with Miss Babbitt the place described by her in her papers, but saw no new evidence of human agency in the surroundings. I cannot so easily see the adaptation of the forms which the chips exhibit to human uses as Miss Babbitt seems to. Those I have figured in my seventh report are the only ones of quartz that I have seen that appear to be possibly shaped artificially.

Those figured in the same report of chert were not found under the natural surface, but in the same neighborhood. Their artificial origin cannot be doubted, but the style of workmanship exhibited by them is far different from the irregular fracture seen on even the most perfect of those consisting of quartz.

If these quartz chips should prove to be of human origin I should unhesitatingly assign them to an interglacial age, since they are found in a deposit which is attributable to the high-water stage that accompanied and followed the ice of the last glacial epoch in Minnesota.

Very truly,  
Minneapolis, 14 Jan., 1885.

N. H. WINCHELL.

—o—

*Editor Am. Antiquarian:*

Since the discovery of my mound cloth I have made diligent search among the plants with the hope of discovering the source whence those ancient spinners procured their supply. In this I have been successful, having discovered in the tough outer coating, or bark of the wandering milkweed (*radix apocynum*) a fibre that meets all the requirements of the case. Even the scales, and broad, comparatively—namely, from  $\frac{1}{3}$  to 1-16 of an inch strips—utilized as fringe—are here fully explained. Moreover it is susceptible of any required subdivision, as the enclosed sample of thread doubled and twisted measurably demonstrates.

I have not had an opportunity of comparing its strength with flax or hemp. But I am well satisfied as to its adaptability to the manufacture of textile fabrics, and cordage as well.

The enclosed sample is from stalks which were exposed to the destructive effects of the weather since last summer. Yet, it retains a marvellous degree of strength, as you will discover on testing it.

If health permits, I shall give this matter further attention.

S. H. BINKLEY.

Alexandersville, O., June 21st, 1886.

—o—

## ELEPHANT'S FOOT.

*Editor Am. Antiquarian.*

We have traces and relics of a prehistoric people in this county which have never been written up or noticed in a public way, which I will investigate and send you a description. This is Simpson county, Ky., and is a border county on the Tennessee line. The Louisville and Nashville R. R. passes through it. Sumner county in Tennessee joins this. In this county about 15 miles north of Nashville I opened a mound and exhumed a quantity of relics of which I send you a description, viz.: two skulls in a

fair state of preservation, the occipital portion of both flattened; two heads with posterior portion of skull destroyed, valuable for showing the outline of the face including the inferior maxillary bone; one small vase or cup, showing some artistic skill, of a compound of clay and shell, very thin and delicate; a quantity of pottery, fragments of vessels of various sizes, of clay and pulverized shell; quite a number of spear and arrow heads, flint; and one mallet of hard stone, granite, weighing four or five pounds; two circular shells, one well preserved, the other will hardly bear handling, from its state of decay, but a facsimile of each in workmanship, found at different periods, two years intervening but at the same burial place in different graves. In August 9, 1875 I visited the mound a second time and opened one or two graves, and found the second shell in the same grave with the flattened skull. This skull is in a better state of preservation, the depression in occipito-parietal portion is precisely similar to the first, but there are no ossa-triquetra in the lamboidal suture as in the first. It was in the grave with this skull that the image of a man's head was found, a sketch of which in pencil, I send with this communication. I failed to find the bust; the head shows recent fracture, and must have been broken off by the pick while digging in the grave. I failed to mention a curious device found in this grave which bears some resemblance to an elephant's leg and foot. It is hollow with a little hole in the bottom as if for a pipe stem. It is made of pottery, and represents the foot and the lower part of the leg of the animal. I have made an effort to portray them on paper with pencil. Fig. 1 represents the bottom of the foot, showing more clearly three toes which cannot be shown by Fig. 2.\*

Franklin, Ky.

C. H. EDWARDS.

---

\*The drawings which were sent with this letter would to some minds convey the idea that it was an elephant's foot which was imitated in the pottery. But the description and drawing would show that it was a bear's foot, especially as three toes are visible.--Ed.

-6-

Part. 4. 9      Editorial.

---

### THE ANTIQUITY OF MAN IN AMERICA.

The meeting of the Anthropological Society of Washington, Nov. 16, was devoted to the reading of two papers bearing on the antiquity of man in America. One of them by Mr. G. K. Gilbert of the U. S. Geological survey, based on the "finding of an ancient hearth on the southern shore of Lake Ontario at the bottom of a well about thirty feet deep." The other by Mr. W. J. McGee, based on the "finding of an obsidian spear head or knife, four inches long and beautifully chipped, in Walker River Cañon, Nevada." Mr. John Murdock also reported at the same meeting the discovery of a pair of "wooden snow goggles" in a shaft which his party dug, at the depth of 27 feet below the surface at Point Barrow.

Prof. O. T. Mason in *Science*, Dec. 10, speaks of these discoveries as if they furnished "Archæological enigmas." He calls two of them "neolithic finds of an advanced type" but the other a paleolithic, and classes with it as paleolithic a civilized implement, called a Spanish rallador or grater from British Honduras. "It consists of a plank of hardwood, 18 inches long and 10 inches wide, into which have been driven nearly 2000 bits of quartz no larger than tiny arrow heads, only they are not chipped in the least and are less shapely." The rallador he compares to the *tribulum* or threshing sledge from Tunis. In reference to the finds Mr. Mason concludes, "with such material as the Gilbert hearth, the McGee spear head, the Murdock spectacles, the Tunis tribulum, and the Honduras grater, the question does not seem to be as to the antiquity of man but whether archæology will help us in ascertaining his primitive condition on this continent." "We have evidence which would satisfy some minds that at the end of the glacial epoch there lived men who built fires, chipped obsidian beautifully, and wore snow goggles; while in this Nineteenth Century men are still in the lowest story of the stone period." Mr. Gilbert, however, in *Science*, Dec. 17, makes a correction. He says: "the local relations indicate that the hearth was made during the accumulation of the shore deposits, so that its antiquity is somewhat less than that of the culmination of the last general glacial of North-eastern America. Its antiquity is virtually identical with that of the Niagara river. The estimate of 7000 years is based upon the hypothesis that the rate of the recession of the falls has been uniform; a hypothesis not yet fully examined." He adds "The hearth was discovered by Mr. Daniel Tomlinson of Gaines, N. Y., and our

knowledge of it is based entirely upon his oral evidence." He says also that the formation described by Mr. Murdock is unquestionably littoral and not greatly elevated above the present coast. What we know of recent oscillations of coasts in Arctic regions and of the rate of formation of littoral deposits, tends to the opinion that the Point Barrow goggles have an antiquity far less than that of the other finds."

We desire to express our gratification with the candor and the conscientious regard for truth which both of these writers exhibit. Prof. Mason, we judge, rather leans toward the belief in the extreme antiquity of man, but he has the candor to acknowledge that there is an inconsistency in the use of the terms neolithic and paleolithic, the neolithic relics in these cases being older than the so-called paleolithic. This is a point to which we have referred in the *ANTIQUARIAN* when speaking of the paleolithic relics in the gravel beds of Trenton, and the stone ollas or stone mortars and other relics found beneath the lava beds in the auriferous gravel of California.\* As we understand it, Prof. Whitney claims the auriferous gravels to be older than the Trenton gravel in which Dr. Abbott found so many so-called Paleolithic relics; in that case the neolithic specimens are older than the paleolithic. Certain geologists say that there is great uncertainty about the lava beds and the auriferous gravels, and the date of any relic found in them cannot be established, but geologists also state that the Trenton gravel is not so old as Dr. Abbott first claimed it was. This leaves the case about as it was. Neolithic relics hypothetically older than paleolithic. The liability threatens the archaeologists who are making these remarkable finds that their discoveries will prove too much; they put the wooden goggles farther back in time than the obsidian spear heads; and the polished stone mortars farther down in the ground than the rude argillite implements and so will make a progress backward. We would say also that there are other difficulties which come up in connection with these finds and which make the problem still more complicated. These difficulties arise from the archaeological side and not the geological. The discovery of so many argillite relics has a tendency to throw doubt upon the artificial origin. On this point archaeologists seem to be divided. Prof. F. W. Putnam thinks that all of Dr. Abbott's relics are genuine paleolithics; several thousand of them have been discovered; he even goes so far as to describe how they were hafted. Dr. Rau also endorses this position and says: There is no evidence but a probability, that some of the argillite specimens were used with handles." On the other hand, quite a number of the members of the Philadelphia Academy of Science, have expressed serious doubts about Dr. Abbott's finds and so we must suspend judgment.

The quartz relics† which Miss Babbitt claims to have discovered

\**Amer. Antiq.* Vol. VII, No. 1, p. 49; Vol. VII, No. 3, p. 177; Vol. VII, No. 6, p. 306.

†Compare Paleolithic Flint Implements from the gravel at Reading, G. B., *Jour. Anthropol. Inst.* Nov. '84, p. 193. Article on "A Paleolithic Floor at N. E. London" by J. E. Smith, *Jour. Anthropol. Inst.* Feb. '84, p. 357.

among the gravel beds of Minnesota, have undergone the same experience.\* Dr. C. C. Abbott and Prof. Putnam agree upon their artificial origin and endorse them as confirming the Trenton finds. While on the other hand Prof. N. H. Winchell of Minnesota, in his letter expresses himself uncertain as to their artificial origin, though their geological position would indicate that they were very ancient.† Accidental fractures we think might account for the majority of Miss Babbitt's relics, and we doubt very much if they should be taken as furnishing evidence of the presence of paleolithic man in the pre-glacial period. These finds of paleolithic and neolithic relics in wells and gravel banks on the edges of bluffs and littoral deposits are not so convincing as they might be. Many of them are mere accidental finds and nearly all of them lacked the careful supervision of a scientific man who understood the points at issue, when they were taken out of their so-called matrix. European Archæologists do not rely upon such haphazard discoveries and why should we?

We do not believe that they prove so great antiquity even if they were all of artificial origin and genuine finds. We here quote from Sir Wm. Dawson who has recently written upon the subject‡:

"If the earliest men were those of the river gravels and caves, men of the "mammoth age," or of the "Paleolithic" or Palæocosmic period, we can form some definite ideas as to their possible antiquity. They colonized the continents immediately after the elevation of the land from the great subsidence which closed the Pleistocene or Glacial period, in what has been called the "continental" period of the Post-glacial age, because the new lands then raised out of the sea exceeded in extent those which we have now. We have some measures of the date of this great continental elevation. Many years ago, Sir Charles Lyell used the recession of the falls of Niagara as a chronometer. Estimating their cutting power as equal to one foot per annum, he calculated that the beginning of the process which dates from the Post-glacial elevation was about thirty thousand years ago. More recent surveys have, however, shown that the rate is three times as great as that estimated by Lyell, and also that it is probable that a considerable part of the gorge was merely cleaned out by the river since the Pleistocene age. In this way the age of the Niagara gorge becomes reduced to perhaps seven or eight thousand years. Other indicators of similar bearing are found both in Europe and America, and lead to the belief that it is physically impossible that man could have colonized the Northern Hemisphere at an earlier date. These facts render necessary an entire revision of the calculations on the growth of stalagmite in caves, and other uncertain data, which have been held to indicate a greater lapse of time. The value of the demands made on other grounds is uncertain and fluctuating. Egyptian chronology is constantly varying as new discoveries are made. Anthropology cannot precisely measure the rapidity of

\*See "Vestige of Glacial Man in Minnesota," by Miss F. E. Babbitt, *Amer. Nat.* June, '84 p. 594.

†See letter on page 46.

‡Sunday School Times, Dec. 23, "Origin of the World," Chap. VI. "Recent Decisions of Genesis," *The Expositor*, April, 1886.



variation in the infancy of mankind, and Hale has recently shown that American facts respecting language prove that it may vary much more rapidly than has heretofore been supposed.

It is farther to be observed that these demands for long time relate to the Post-diluvian period, about which there is a consensus of historical evidences limiting it to at most 3000 B. C., and that there is no geological evidence of any considerable change, either physical or vital, within that time."

Against these opinions of the eminent Geologist we suppose some will place the discoveries of the foot-prints in Nicaragua concerning which so much has been said.\* Prof. F. W. Putnam has taken issue with us in reference to these foot-prints and has sent us photographs of them to show that they were genuine human foot-prints.

Dr. Earl Flint, however, speaks of the geological age of the foot-prints as follows: "After the fifth eruption there was a repose of many centuries during the accumulation of the clay. Above this and under the ash of the sixth eruption we find fossil leaves and plant stems distinct from those of the lower layer on which the foot-prints occur." In reference to these finds we think Prof. Putnam himself mainly relies upon his own study of the slab, and says nothing about the geological position and age of the footprints.

Before the foot-prints are brought into the case as proof, there should be a study of the deposit by some professed geologist. Prof. Putnam speaks as an archæologist and pronounces the foot-prints human. We do not dispute his conclusions and yet we remember that when the Carson foot-prints were discovered, there were a number of men who at once decided that they were human, and we found that they were mistaken, and we think that there is a possibility of Prof. Putnam being mistaken in this case. We will not undertake to say what animal has a foot-print resembling man. We only say this, that Prof. E. D. Cope brought into the Anthropological section at Philadelphia in 1884, a tooth which he claimed to be a human tooth taken out from the Miocene. We happened to hear an English naturalist say "it may have been a monkey's tooth." We would rather rely upon the opinion of Dr. Dawson than any of these hap-hazard finds for he seems to have considered the subject carefully and based his opinion upon substantial evidence. He says:

"It is true that announcements have been made from time to time of the discovery of remains indicating the existence of man in deposits as old as the Miocene period; but these alleged facts have broken down on investigation, so that no certainty can be attached to them. Nor has any one discovered in the Tertiary formations older than the modern or later Pleistocene any animals nearly related to man which might be regarded as his precursors.

To this recency of man we have to add the farther fact that the earliest known men are still members of the human species, not

\*American Antiquarian, Vol. VII, No. 3, p. 150. Vol. VII, No. 6, p. 351. Vol. VIII, No. 4, p. 230.

exceeding in their variation the limits presented by the various races of men in the present day. Nor do the bones or the works of the earliest men present any approximation to those of lower animals. In physical development and cranial capacity the oldest men are on a par with those who have succeeded them, and, in some respects, superior to the average."

---

## NOTES ON AMERICAN ETHNOLOGY.

BY D. G. BRINTON, M. D.

**PAMPA'S NAHUATL GRAMMAR.**—This little work recently printed at Puebla, Mexico, for use in schools is a terse and well arranged synopsis of the grammatical principles of the Nahuatl language, as set forth by the best of the older grammarians. It will prove a convenient and easy introduction to the tongue. The author refers with severity to the work of Diego Caballero, published in Mexico a few years ago, evidently considering it an untrustworthy guide. At the close of his volume Señor Pampa promises another work soon, containing exercises and reading lessons in Nahuatl. As it is announced that his present issue is for class use, we are to judge from this that the Nahuatl forms, or is to form a part of the regular scholastic instruction in some districts in Mexico.

**LEON'S TARASCAN SYLLABARIO.**—The Tarascan language is still spoken in many parts of Michoacan, and Dr. Nicholas Leon, of that State has thought it well to publish an introduction to the tongue in the form of a "*Syllabario*." He presents its phonetics, the methods of composition of its words, and its simpler grammatical principles. As he is himself not only a native of that State but also a gentleman of wide culture and great scientific enthusiasm, we may depend upon his little treatise as an authentic and valuable exposition of the tongue as it exists at the present time.

**CARL BOVALLIUS' NICARAGUAN ANTIQUITIES.**—Bovallius is a Swedish Naturalist, who in the years 1888-4 spent some time in Nicaragua collecting in his branches. He found time, however, to do some digging in the ancient graves, and to make minute drawings of various Antiquities. Through the exertions of Dr. Hans Hildebrand of Stockholm, these drawings have now appeared in a handsome quarto volume with a preface and accompanying text. There are forty-one plates and a map of Zapatero. Several of the drawings are of the same objects as are portrayed in Squier's *Nicaragua*, but the originals are rendered more faithfully. A number of other figures from native carvings in stone are presented for the first time. They all disclose approximately the same state of culture. Various fragments of pottery and objects in stone are also depicted, and a number of examples of rock inscriptions from the island of Ceiba. The volume appears as one of the publications of the Swedish Society of Anthropology and Geography.

**WAMPUM IN VENEZUELA.**—Dr. Ernst, of Caraccas, has lately published a description of the natives of Venezuela from an Italian source, written as early as 1584. Among other interesting matters the writer mentions that they pos-

sessed numerous small polished pieces of bone which they strung on strings. Dr. Ernst is of opinion that these were the wampum or shells known to the Spaniards as "*Dinero de Concha*," or shell money. It appears to have continued to be in use till a late day.

**MEXICAN FUNERAL CEREMONIES.**—The article in the *American Journal of Archaeology* by Mrs. Zelia Nuttall on the terra cotta heads from Teotihuacan opens an interesting study regarding the ancient Mexican funeral ceremonies. These small clay heads, which are found in great abundance near the famous sepulchral site of Teotihuacan, appear to have been portraits of the deceased, which were manufactured to be placed upon small effigies or images. These were cherished by the survivors and set up in the temples or preserved as domestic Lares and Penates. The article is based both on wide reading and on extended studies of these remains, conducted in part at Teotihuacan itself.

**JADE IN AMERICA.**—In the last published report of the Peabody Museum, p. 414, Professor Putnam, discussing some fine jade ornaments from Central America, states that they were found to possess the same hardness, color and specific gravity as some jade specimens from China; and immediately adds what seems to me the hasty conclusion:—"This of course implies, in the absence of any other known locality of this particular variety of stone, that the American specimens came from the known localities in Asia."

This suggestion, based on studies of the well-known late Dr. Heinrich Fischer, has been eagerly taken up by the Baron J. de Baye in an article entitled "*Un Rapport Archéologique Entre l'Ancien et le Nouveau Continent*," in which he would develop and establish ancient commercial relations to explain the presence of Jade in America. All this seems unnecessary. It is well known that jadeite specimens from the same locality differ widely in all the points named by Professor Putnam. It is also well known that certain forms of jade were very common in Mexico and Central America and were obtained there. The Chinese have many varieties of jade; and doubtless from a sufficiently large collection from their country it would be possible to match any specimen found elsewhere; but it, would be quite unnecessary on this account to say that all jade comes from China!

**THE CHUCHONA LANGUAGE.**—The Chocho or Chuchona language is considered to be a dialect of the Mixteca, and was spoken in the region occupied by that nation. The missionary Father Acevedo, wrote several sacred dramas in it, the MSS. of which were preserved at Oaxaca down to a comparatively recent date, and may yet be extant. In 1580 Father Roland had printed at Mexico a catechism in Chuchona, a work now of exceeding rarity. A MS. copy of it found its way to Europe, and has now been reprinted by the Count De Charencey. It forms an octavo pamphlet of 32 pages, and thanks to this distinguished student of American linguistics, we have now access to ample specimens of this curious dialect.

**THE FISCHER COLLECTION.**—Through the liberal efforts of Mr. W. W. Blake the Smithsonian Institution has lately come into possession of the small but choice collection of Mexican Antiquities gathered by Father Fischer. They are now favorably displayed in the main hall of the Smithsonian. Objects of special interest are a number of obsidian cores, from which the knives, razors, etc., were split off; a large obsidian weapon nearly two feet long; a specimen

of the ancient wooden sword armed with obsidian flakes; an especially remarkable skull, about the size of a hen's egg, carved from a piece of transparent rock crystal. This latter must have been a wonderfully difficult work to execute.

**THE ELEPHANT PIPES.**—The last number of the Berlin *Zeitschrift für Ethnologie*, contains a long article by Dr. Max Uhle of Dresden on the alleged "Elephant Pipes," which have been found in the United States. It is a very fair judicial discussion of their genuineness, and does not pronounce any positive opinion on the subject. The tendency of the discussion was in favor of the view that there is nothing *a priori* impossible in their occurrence as genuine aboriginal relics of ancient date.

---

## NOTES FROM THE FAR EAST.

BY PROF. JOHN AVERY.

**THE SIX-SYLLABLE PRAYER OF THE TIBETANS.**—Every one who has traveled in or written about Tibet has spoken of the famous prayer, which, even more than the Lord's Prayer in Christendom, is the universal form in which religious feeling finds expression in that desolate region. It is inscribed on stones, twirled on prayer-mills, and waved on flags in the breeze; it is constantly uttered in the house and by the way,—in short, it is the Tibetan's safeguard in this world and his passport to whatever good is imagined in the next. This wonderfully efficacious prayer is a marvel of convenient brevity, and reads, *Om ma-ni pad-me hum*. So far as its mystical import can be briefly compressed into words, it may be translated, "O jewel in the lotus, Amen!" There have been many attempts to discover the original sense in this now meaningless apostrophe. The words are not Tibetan, but Sanskrit; and must have been imported from India along with the Buddhist religion at some time not earlier than the 7th century, A. D. *Om* is a mystical monosyllable, which stands at the head of most Hindu writings, and in the later philosophical schools is supposed to represent the Hindu Trinity, Brahma, Vishnu, and Shiva. *Mani* means 'precious stone' or 'jewel.' It is also applied in Tibet to walls of loose stones, usually about five feet high by five to ten broad, and from thirty to a thousand or more feet in length. These are found all over the country, and are built for the most part in fulfillment of a vow or to secure some boon from the gods. One finds in these walls stones inscribed with the Tibetan prayer, or with pages of the Tibetan Scriptures. The third word, *padme*, is locative case of *padma*, 'lotus,' a flower held peculiarly sacred in India, and sometimes used as a symbol of creative power. *Hum*, also written *haun*, is an interjection nearly corresponding to "Amen."

That this prayer was early introduced into Tibet is proved by its occurrence in the oldest literature. To the great majority of Tibetans it is a magical formula, and its words have no separate significance; the learned monks say that it is not addressed to Buddha, but to Avalokiteshvara, one of the mythical beings of Northern Buddhism, whose birth was from the cup of the lotus-flower, and who is the preserver and ruler of mankind. To him some ascribe the composition of the prayer. Koeppen holds that the formula is of Shivaite origin, and that the "jewel" refers to the *lingam*. The latest explanation that we have seen is by Mr. Murray-Aynsley in the *Indian Antiquary* for May. He suggests that the

the prayer apostrophizes the supposed tooth of Buddha; the sacred object in Ceylon, whose numerous envelopes of gold or silver gilt might be not unaptly compared to the petals of the lotus. The writer believes that his theory is strengthened by the form of an old brass object bought by him at Benares, and described as follows: "At the base of it is a bull, an emblem of Shiva, from whose back rises a lotus bud, which, on a couple of turns being given to it, opens its petals and discloses a small agate egg. Behind the bull is a cobra, with its body elevated as if in the act of striking. A ring, which it holds in its mouth, serves to support a small pointed vase, which is perforated at its lower end. If this vessel be filled with water, the liquid slowly drops upon the egg in the center of the flower, and thus a libation is poured on the *jewel in the flower of the lotus*." While this curious object seems designed to give material expression to the literal signification of the prayer, we hardly see how it is thereby connected with the tooth-relic; while the presence of Shiva's bull suggests, rather, a Brahminical origin. In the same connection, Mr. Aynsley notes the interesting fact that Mané often recurs as a prefix to proper names of sites in Brittany where dolmens and other megalithic structures abound.

**SACRED TREES IN THE EAST.**—The writer from whom we have just quoted, in a series of papers on Asiatic Symbolism recently published in the *Indian Antiquary*, remarks that "the tree of life, bearing twelve manner of fruits, yielding its fruit every month," described by John in the Revelation, has its counterpart in eastern art. On Persian carpets is seen the figure of a tree with twelve leaves, or, sometimes, twelve flowers or fruits. Yarkand carpets bear the same representation, but in a more conventional form. The Banian and the Pipal are esteemed sacred in India. Under the latter Gautama was seated when he attained Buddhahood, from which circumstance it is known as the Bo-tree or "tree of wisdom." It is told that when the disciples of the Sage desired to transport a portion of the same tree to Ceylon, but were unwilling to mangle it by cutting, a branch detached itself, and took its place in the golden vessel designed to receive it. However this may have been, there seems little doubt that the famous Bo-tree now growing at Anurādhapura in Ceylon was transplanted from Buddha Gāya in Hindustan more than 2000 years ago, when the new faith was first preached in that island. In the Himalāya, where the Pipal does not grow, a species of pine, the Deodar, "tree of the gods," is held sacred, and groves of it are planted around the temples. Among the non-Aryan tribes of India, whose home is so largely in the forests, we are not surprised to learn that a sacredness is attached to trees. This is because they are supposed to be the abode of spirits. Hence, in making clearings for their rude agriculture, some conspicuous trees are always reserved for the accommodation of these sensitive and rather unwelcome neighbors.

**SOME ANCIENT NAMES OF CEYLON.**—One of the oldest names of the island seems to be Lanka, which occurs in the Rāmāyana and other Hindu literature. It seems to have been applied at first to the principal town, and then to the whole island. According to Burnouf, Lanka-dvīpa means "fortunate isle." Hwen Tsang, the Chinese pilgrim who visited India in the 7th century, says that the island was originally called Pao-chu, the Chinese equivalent of the Sanskrit Ratna-dvīpa "isle of gems." In the time of Alexander, Ceylon was known to the western world as Taprobane, the Greek corruption of the Pali Tāmbapanni or the Sanskrit Tāmrparṇi. This name is variously explained as meaning "red-handed," in allusion to a myth told of its first settlers, or "red-leaved,"

with reference to the leaves of the red lotus or of the sandal wood. The author of the *Periplus of the Erythrean Sea*, who appears to have written in the last quarter of the 1st century, A. D., calls the island Palai-simoundou, which Lassen translates by "Head of the Sacred Law." The name Taprobaue seems to have been supplanted early in the Christian era by another one, also derived from native usage. Ptolemy calls the island Salice and the people Salae, from an original Sinhalaka or Sihalaka, "land of the lions." In explanation of this name, it is said that king Vijaya and his followers, who conquered Ceylon for Buddhism, called themselves "lions." It was called Serendivus by Ammianus (4th cent.) and Sieladiba by Kosmas (6th cent.); a century later it was known to the Chinese as Sang-kia-lo, and was called Seilan by Marco Polo in the 13th century. These names are probably all to be referred to one original, Sibala or Sihala-dipa, "Sihala's Island." Still, some writers look to a Malay origin, and derive from the Javanese *sela*, "precious stone." Other variations of the same original are, Selin, Syllen, Sillan, Celan, Zeilan, Ceilao, Ceylon.

This favored spot of earth has ever held a conspicuous place in eastern poetry and fable. To the Hindu it is famous as the stronghold of the demon Ravana, whose rape of the lovely wife of Rama and the gallant campaign for her rescue are a favorite theme of Indian story. To the Buddhist it is dear as the first land outside of India to receive the teachings of Buddha, and where the "law" has ever since been preserved in its greatest purity. To the western imagination it has been from early times an earthly paradise, second only to that of our First Parents. The Mahometans say that Adam fell on this island after his expulsion from Eden, a merciful arrangement of the Almighty to prevent a too sudden transition from the delights of the Garden to the sorrows of his coming lot. Mas'udi records that Adam brought with him the leaves which covered his body in Paradise, and that these, becoming dry, were scattered by the winds over India, whence sprang all its aromatics. The distance from Ceylon to Heaven was believed to be not more than forty miles. Though the natural beauties of the island are certainly great, yet they have been somewhat exaggerated; and, among other creations of the fancy, the "spicy breezes" that "blow soft o'er Ceylon's isle" hardly exist outside the brain of the poet.

**THE CENTENARY OF THE ASIATIC SOCIETY OF BENGAL.**—It may seem late to refer to this noteworthy event, which occurred on the 15th of January, 1884; but the memorial volume, which summarizes the achievements of the Society during the long period of its existence, has come to hand only within the present year, and many of the facts will be new to our readers. The volume consists of three parts, which treat successively of the history of the Society; a summary of what it has done for Archaeology, History, Literature, etc.; and the same for Natural Science. The Society was organized in Calcutta on the 15th of January, 1784, under the lead of Sir William Jones; and its broad scope is indicated by his declaration that it would include "Man and Nature; whatever is performed by the one or produced by the other." This Society being the first one organized in Asia for the purposes named, adopted as its title "The Asiatic Society," which it retained until the formation of the Royal Asiatic Society in London made it convenient to take a more specific name, and it has ever since been known as the "Asiatic Society of Bengal." It did not, however, assume thereby a subordinate relation to the English Society.

Scholars of all nations are declared eligible to its membership, which is classified as Ordinary, Honorary, and Associate. Regular meetings are held on the first Wednesday of each month, except September and October. The Society owns a large building in Calcutta, in which its sessions are held, and its library and scientific collections are preserved. The former consists of about 30,000 volumes, inclusive of a large number of important manuscripts and other rare works. "The Asiatic Miscellany," in which it was designed to publish the proceedings of the society, soon gave way to "Asiatic Researches," of which 20 volumes were published at irregular intervals down to the year 1839. The present organ of the society, known as "The Journal of the Asiatic Society of Bengal," grew out of a monthly publication started by Capt. J. D. Herbert in 1829, under the title "Gleanings in Science." It gradually superseded the "Researches," and in 1832 was formally adopted by the society, under the editorship of James Prinsep, who gave it a predominantly literary, instead of scientific, character. In order to meet the separate needs of the principal classes of its patrons, it is published in two distinct parts, one devoted to literary and the other to scientific topics. Besides the Journal, the society publishes in "Proceedings" an account of its monthly meetings and such brief contributions as are not thought important enough for the larger periodical. The aggregate amount that the society has published in these ways, during the century of its life, is believed to be not less than 50,000 pages, and includes very many papers that have enjoyed a world-wide reputation. Besides its regular periodicals, the society has undertaken the publication of texts and translations of native works. These have amounted to 140, of which 111 are in the series known as "The Bibliotheca Indica." They include works in Arabic, Persian, and Sanskrit. The history of the society, taken as a whole, is a wonderful record of achievement for learning,—all the more wonderful, since it represents, in the great majority of cases, work done in brief intervals of time snatched from exhausting judicial and administrative labors in an uncongenial climate.

---

#### NOTES ON EUROPEAN ARCHÆOLOGY.

BY HENRY PHILLIPS, JR.

**REINDEER IN ITALY.**—On March 28th, 1886, Signore Battaglini discovered at *Torcello* an extremely ancient prehistoric human habitation in the lake, and is of the opinion that the station was a favorite resort for the reindeer. Mr. Pigorini, however, thinks that the existence of that animal south of the Alps in prehistoric times is not as yet satisfactorily proved.

**BURIAL URNS.**—Mr. von Piechowski found on his estate near Berent, West Prussia, a stone chest containing burial urns; the latter were each standing on three small stones, and were filled with earth and remains of incinerated bones. The whole vicinity has been fruitful in similar discoveries for a number of years.

**BONES IN URNS.**—Mr. Von Schulenburg has written a paper for the Berlin Anthropologische Gesellschaft on the methods of placing burnt bones in the funeral urns. Dr. Albrecht contributes to the same Society a paper on the Morphological value of superfluous fingers and toes.

**URN BURIAL FIELDS.**—Mr. Gaertner discovered on May 14th, in an urn burial field near Luckan an urn filled with the remains of human incinerated bones, and 80 clay pearls, of a bluish gray color, perforated for stringing; the dimensions are not given.

Twenty Roman horse-shoes were lately found near Detmold; according to the sizes they seemed to be made for mules rather than horses. Each has four nails on each side, in a sunken rim.

**A SYMBOL ON COINS.**—Mr. Olshausen contributes to the Berlin Society a lengthy paper on the *Triquetrum*, so well known to all scholars; the symbol occurred very frequently in antiquity and even to the middle of the last century was preserved on the coinage of the Isle of Man.

**ANTIQUITIES IN HANOVER.**—Dr. Mueller of Hanover contributes a paper on the Antiquities of the Province Hoya both historic and prehistoric. The whole land is full of remains, graves, mounds, etc.

**DR. HARTWITCH** contributes a paper on the Archæology of Arneburg am Elbe, in which he sets out the results of the latest explorations and discoveries.

**DR. BASTIAN** contributes a paper on the Mother-and-Fathers-Right from an ethnological point of view.

**DR. EISEL** contributes a paper on Cave-Culture-Places near Olesen.

**DR. VON KLEINSCHMIDT** has lately published an article on the origin and meaning of the name "Zoroaster," the founder of the religion of the Magi; he is of the opinion that the root Zar, or Sar means the Hand from the original, "to protect or take care of;" Thrustra is the rules of Law; so the name *Zarathrustra* is the protector of the laws.

**COUNT BOBRINSKY** has lately opened 58 Kourgans near Smejla, whose contents were of interest; they are from the Stone and Iron ages. The most noteworthy object therein were bronze mirrors, muscle and glass-bead necklaces, a clay urn of the Etrurian type, a plate on which was represented a dragon, a cylinder on which was drawn a horse over which a figure of Assyrian or Egyptian type is seen.

**THE EXCAVATIONS** at Samarcand near Kali-i-Afrosiab have resulted in the discovery of many ancient inscriptions of Archæological value; a large collection of glass objects leads Prof. Wesselofsky to the belief that that manufacture was extensively carried on in Central Asia.

**DR. FRAAS** contributes to the "Correspondenz-Blatt" of the German Anthropological Society a paper on the Wuerttemberg Caves that exhibit the traces of human habitation in the oldest times; flint chips were found, and bones, both human and animal.

**DR. MEHLIS** contributes to the same periodical a paper on a prehistoric necklace found near Odernheim; it consists of 14 bronze rings connected together in a remarkable fashion.

**AT KOEPIN**, has been found about five feet deep in the turf of the moor, a number of bronze and iron objects of the Halberstadt period, (ca. 600 B. C.); the most noteworthy of which are two moulds for hollow celts of an unusual



form; the fibulæ are also of a not common variety; the analysis of some reveals the presence of nickel, pointing perhaps to a meteoric iron. The whole find is regarded by the Archæological world as of the greatest importance.

SOME years since at Orvieto, a Nekropolis was discovered whose graves and their contents pointed back to the remotest ages of human habitation. Sig. Mancini has found therein many objects, including vases red and black, bronze ornaments, tesserae, etc., and a number of very fine specimens of the "ÆS RUDE," the earliest known of all the Italian monies, and of the most archaic forms. At Bologna, also, years ago, a large find was made of the "ÆS RUDE."

HERR PAHLKE in some recent excavations in Lake Jankowo, about 18 inches below the surface of the water, found a number of large oak trees placed alongside of each other in a slanting position, evidently having served either as a palisade for protection or a base to the dwellings of some prehistoric inhabitants. Not far off, in another portion of the lake were found bones of greater and lesser animals, fragments of clay urns and several small clay vases. In another place a well preserved human skeleton about six feet in length with the head to the south-east; nothing whatever else was found with these remains.

HERR ARZRUNI contributes to the Berlin Anthropol. Society the results of his examinations and comparisons of a number of jadeite and nephrite implements from Venezuela, Hissarlik and Sardes. He subjected them to careful microscopic investigation and comes to the following conclusions: 1. That the nephrite from Sardes and Hissarlik was similar both in external microscopical aspects. 2. That the jadeite, although externally alike, were of the same microscopical structure.

HERR OSSOWIDZI has lately discovered near Oranienburg, Kremmen and Liebenwalde many interesting objects, among which are a remarkably carved stag's horn on which flowers, heads, etc., were delineated, a horn hammer with the emblem of the sun, some bronze celts, a bronze sword, hammers with holes drilled in them, stone axes, etc., etc. The finds were in good order.

A REMARKABLE series of prehistoric objects formed of canine teeth, was lately discovered on the estates of Herr Bergling near Westeregeln, among other remain, including a human uncremated skeleton. The teeth were all pierced through at the root end, and had apparently formed a necklace. The presence of this ornament and an extremely small bronze ring, which would not even pass over a man's little finger, seemed to point to the interment of the daughter of a tribal chieftain, perhaps in early womanhood.—[Zeit. für Ethn. 1886. 26.]

---

## LITERARY NOTES.

BY THE EDITOR.

STONEHENGE.—An article in the *Antiquary*, Oct. '86, contains an explanation of Stonehenge, Kist Cotty House, etc., which is somewhat novel. The article is entitled Scandinavian Elements in the English Race. The author maintains that these monuments are not Roman, Saxon, Celt, or Briton, but Scandinavian Danish. The Vandals were the builders of them. They resemble the

Vikings who loved violent exertion. That such immense blocks of stone should be fetched from great distances and set up as temples; or portions of temples is not surprising when we consider the tempers of the men. It was the custom for this people to assemble the different kingdoms or states into a grand meeting. The place of assembly was frequently the grave mound of some departed chief who slept below, perhaps in his dragon ship with his drawn sword in his hand. On the apex of the hill was fixed the Ting-stone formed of three vast granite blocks. On these, the chiefs took their stand, the king in the centre, the priest on the right hand, the elder on the left. Around these, in a circle, stood the the Jarls, or Earls. Beyond these, lower down, came a ring of land-owners, and outside of these a third ring of retainers. Before the priest lay the victim on a broad, flat stone ready to be offered. The elder held his wand of office carved full of mystic runes. The king wore the gilded helmet with the eagle wings of Olin. Sometimes the Ting-stones were placed in a large plane and were used as altars for the immolation of the victims. The victim was sacrificed, the Augury explained, and business commenced. The victims were slaves, prisoners taken in war and they were offered to Odin. The crowning stone which in Kit's Cotty House is called the roof, was the slab on which the victim was immolated. The Scandinavians, like all sea-faring people, had a great dread of fire and a dislike of towns and fortified places. Love for the blue sky, regard for the orls of heaven prevailed. Such great places of meeting as Stonehenge were placed "under free heaven," no roof being suffered save the "blue vault above." They were familiar with the constellations. Ursa Major they called the Dog. The Lesser Bear was Charles's wain or Charlevagn, or man's wagon; probably Thor's war chariot. The three stars in the belt of Orion were called the Distaff of Frigga. The Milky Way was named "the path or street of Winter." The north star assumed a sort of divinity in their eyes. In Denmark there are three great places where, as at Stonehenge, the "All-thing or General Assembly met. One is at Lunden, in Scania; another at Leyva or Lethva, in Zealand, and the third is near Viburg in Jutland. These monuments, the vast size of which has preserved them, like Kit's Cotty House, Stonehenge, and other remains in England, from the ravages of time and weather, are nothing else than great massy stones, set up unhewn in a circle. In the middle is one much larger than the rest in which the royal dignity was supposed to reside. The other stones were for the twelve peers, the jarls who attended the king in peace and in war, while without the circle were the freemen and yeomen who took part in the grand debates, just as has been described as performed on a smaller scale on the grave mound of a departed hero.

**THE GRAVE OF CÆSAR BORGIA.**—The retribution of history is manifest in this, that the grave of a Prince who was once the terror of all Italy but who found a chronicler in Machiavelli, should remain unknown so long. Search has been made for it at Navarre where Borgia lost his life. The body has at last been found. It was in the street, in front of the church of Vienna. It was not in consecrated ground, but below the feet of the tramping multitude.

**TESSELATED PAVEMENT** found in Colchester, five feet beneath the surface, remarkable, for the chaste elements of its geometrical pattern which probably points to an early period. Colors are principally white and black, but red and yellow, and pale blue in the center. The fragments have been transferred to the local museum.

**DUFFIELD CASTLE** next to the tower of London was the finest in England while it was standing. It was destroyed in the twelfth century. The ground plan of this tower or castle has been recently discovered. Rev. J. C. Cox says that the history of the place is, that here there was a Roman fort, a Roman road from the Wirksworth lead mines, an earth work in Anglo Saxon times, and a place where the Anglo Saxon Lord held his court. At the time of the conquest Henry de Ferrers built the castle for the sake of holding his barony. The height of the tower was 100 or 110 feet, the breadth or diameter, 98 feet, only two feet smaller than the tower of London. The foundation walls were 15 feet thick all around. The apartments 63 ft. by 41, and 63 ft. by 18. The castle was destroyed by Henry II. in consequence of the disaffection of Ferrers.

**GAULISH BOAT.**—Some excavators in the bed of the Cher have discovered what is described as an enormous Gaulish boat formed of a single oak trunk. After many days of labor the mass of timber was disengaged from the gravel in which it was enclosed, and, by means of special apparatus, hauled to the Hotel Cujas Bourges, where it will form one of the leading elements of the collection of the antiquities of the province of Berry. The wood of which it is composed is in excellent preservation.

**A STONE COFFIN OR CIST** has been unearthed at Barnhill near Broughtly Ferry, England. All the slabs forming the sides, ends, and top of the cists were complete and of the usual dimensions. When opened, a small quantity of dust and a number of fragments of what appeared to be human bones were found, as well as two coins or medals about the size of a penny—the metal of which they are formed being of a bright yellow color, and supposed to be gold.

**THE MOABITE STONE** has been described by J. C. B. Mohr, in a volume entitled *Die Inschrift des Königs Mesa von Moab*. The supervision of the lithographs was under Rudolf Smend from photographs and a plaster cast. The fragments of this stone are in the museum in the Louvre and the squeeze of the same is carefully mounted between two glass plates in a revolving frame. Eighty new letters have been made out and the connection as far as the end of line twenty-seven is almost unbroken. This is the oldest specimen of writing ever found in the Holy Land.

**STONE PLUMMETS.**—Mr. H. W. Henshaw has called attention to the stone plummets found in southwestern California. They have been called sinkers, plummets, sling-shots, spinning-weights, fetishes and sorcery-stones. The Santa Barbara Indians say they are medicine stones used by the medicine men in making rain, in curing the sick and various ceremonies. Mr. John Murdock thinks that they were primarily sinkers, and handed down to their present owners would become very sacred.—*American Naturalist*, Jan. 1886.

**TERRA COTTA HEADS.**—Two articles by Zelia Nuttall on the terra cotta heads of Teotihuacan, have appeared in the *American Journal of Archaeology*. From the last we quote: "The clay heads are still found in countless numbers at Teotihuacan, and each year a rich harvest of them is reaped by those who search the freshly plowed stretches of level land that lie across the broad straight *Micoatl* or Path of the Dead, and about the bases of the pyramids. Varying in length of face from one to two inches with exceptional specimens under and above this average, they have invariably been found with only a neck or appendage attached to them, and may be readily distinguished, by this one noteworthy peculiarity, from those that were applied as ornaments on terra cotta vessels, and from fragments of idols, etc."

**ITASCA LAKE.**—The reputation of a discoverer seems to have been coveted by Capt. Glazier. A band of music met him in St. Louis, the freedom of the city given him in New Orleans, all because he visited a little lake which flows by an inlet three miles long into Lake Itasca, and called it the source of the Mississippi. The Geographical Societies have been notified that a great discovery has been made. Ivison, Blakeman, Taylor & Co. have issued a pamphlet with 10 maps to prove that Capt. Glazier is a Charlatan.

**THE STATUE OF HERMES.**—One of the proofs that the Greeks apprehended and were able to embody in their statues the Christian graces, is found in the fact that the statue of Hermes at Olympia was allowed to stand as a statue of the Good Shepherd. "Such peace and tenderness neither sculptor or painter of modern times have been able to transfer even into the face of the Prince of Pity."

**ARCHÆOLOGICAL COLLECTIONS** belonging to W. M. Linney, Geologist of Kentucky, Mr. H. H. Dean, Swanton, Vt.; also of pottery from old Indian grave in Costa Rica, were to be sold by Messrs. Bangs & Co., Dec. 21 and 22, 1886. (See W. E. Woodward's 92nd Sale.)

**LECTURES ON ROMAN ARCHÆOLOGY** to be delivered at the John Hopkins University by Prof. Rodolfo Lanciani, were begun Tuesday, Jan. 4. Subjects: Prehistoric Life of Rome; Parks of Ancient Rome; Libraries of Ancient and Medieval Rome; The Tiber, treasures of the bed of the River; The Garrison of Rome; Palace of the Cæsars; House of the Vestals; Bronze Statues of Rome; Aqueducts, etc.

**MONGOLIAN EXPLORER.**—An expedition under the explorer Potanin, at the expense of the Imperial Russian Geographical Society has been for three years engaged in exploring Mongolia and China. Mr. Potanin has just returned, and we may expect rich and valuable results to be made known.

**THE ORIENTAL CONGRESS** has been postponed until 1890. *Science* says that a memorial to the British Museum to the effect that Parliament be requested to empower the Museum to lend the Oriental Manuscripts to foreign savants, has been prepared by the executive committee of the Congress.

**RUSSIAN ANTHROPOLOGY.**—The Society of Anthropology in Russia has held fifty meetings during the past year, at which there were read 130 papers and reports. It has organized and sent into the field 17 scientific expeditions to the Black Sea, Western Siberia, and the Caucasus, etc. They have published 8 volumes of Memoirs.

**MUSCLE READING.**—Under the department of Anthropology we may well notice the marvelous exploits in muscle reading by Mr. W. J. Bishop, consisting of the discovery of a knife hidden by Rev. James Freeman Clarke; also the number on a bank bill; also an article hidden at a distance from the hotel; also playing a piece of music on the piano which Mr. Whitney thought of, all done by pressing the muscles of the hand. —(See *Science* of Dec. 3.)

**GEOGRAPHICAL NAMES.**—The Thirteenth Annual Report of the Minnesota Geographical Survey contains an article by Prof. A. W. Williamson on Dakota Names. We take the following from the list: *Dakota*, Alliance League; *Anoka*, on both sides; *Chapah*, beaver; *Iyahkba*, sleepy ones, the name of the Iowa Indians; *Khakha*, falls, applied to St. Anthony Falls, par excellence; *Mankato*, a blue skunk, applied to Blue Earth River; *Khakha-Wakpa*, falls river, applied to Mississippi River; *Maya Wakan*, steep banks,—*Wakan*, mysterious, applied to Chippewa River; *Mahomedo Auto*, Grey Bear, mode, Lake—White Bear Lake; *Minnesota*, water nearly clear; *Minnetonka*, great water; *Minne-ha-ha Mini*, water, kha-kha, falls, used with *i*, mouth, means laughing water; *Minneota*, much water; *Mini-wakan*, wonderful water; *Minne-washka*, good water; *Washke*, good; *Owatonna*, straight; *Shakopee*, six; *Sisseton*, *sissin*, *townyan*, village; *Wabasha*, red battle standard; *Waseca*, rich; *Waseja*, *waze*, pine, *ozhu*, place; *Winona*, little daughter, first born; *Wino*, diminutive of woman; *Yankton*, end village; *Mendota* mouth of the river; Lake Minnesota, sky-tinted lake; *Minneiska*, white water; *Mini*, water, *ska*, white; *Sapa*, black.

**HISTORICAL SOCIETIES.**—The Massachusetts Historical Society was instituted at Boston in January, 1791, and was incorporated Feb. 10, 1794. From the time it was formed to 1823, it published 20 volumes of Collections, in two decades of 10 volumes each, 8 vo. This society must be considered the parent society of all similar institutions in the United States. It has been followed by the New York Historical Society, instituted in the city of New York, Dec. 10, 1804, and incorporated Feb. 10, 1809; the Essex Historical Society, in Massachusetts, incorporated June 11, 1831; the Maine Historical Society, incorporated in 1822; the Rhode Island Historical Society, incorporated in June, 1822, and the New Hampshire Historical Society, incorporated May 20, 1823, and incorporated June 13, 1823.

**THE GROWING POPULARITY OF ARCHÆOLOGY** is shown by the fact that the *Sunday School Times* has engaged the following authors to write on special topics during the coming year: "Facts and Considerations Bearing on the Origin and Condition of Primitive Man," by Sir William Dawson, C. M. G., LL.D., F. R. S. "Oriental Traditions of the Deluge," by Prof. Dr. C. Zöckler.

"Indications of Race Origins," by the Rev. Prof. A. H. Sayce, LL. D. "Human Sacrifices in the Early Ages," by Prof. Dr. Francis Brown. "Canaan, Ancient and Modern," by the Rev. H. B. Tristram, LL. D. F. R. S. "Where were the Cities of the Plain?" by Mr. Trelawney Saunders. "Stories of the Cities of the Plain in Talmud and Midrashim," by Dr. Morris Jastrow, Jr. "Messianic Gleams in Genesis," by Prof. Dr. George H. Schodde. "Significance of the Name in the East," by Rev. Dr. William Wright of London. "Caravan Trade in the Ancient East," by the Rev. George Rawlinson. "The Story of the Egyptian Dynasties," by Mr. John T. Napier, of Glasgow. "Recent Red Sea Theories," by Prof. Dr. Hermann Guthe of the University of Leipzig.

**THE VILLAGE OF THE MASCOUTENS.**—We take from the Jesuit Relations a description of the village of the Mascoutens which was visited by Marquette in 1680. "It was beautifully situated on an eminence from whence we look over an extensive prairie interspersed with groves of trees. The river looked like a corn field. It was full of wild rice. It was said that in three leagues we should find the Wisconsin. The question is, where was this village. Mr. C. W. Butterfield says that three leagues must mean either thirty leagues, or three days. He says the mistake is afterward corrected in his narrative as well as on his map accompanying it where the home of the Mascoutens is marked as indicated by Allouez in the Relation of 1670. The language is as follows: "These people are established in a very fine place where we see beautiful plains and a level country as far as the eye reaches. Their river leads into a great river called Mississippi, to which there is a navigation of only six days." Butterfield says, "Joliet and Marquette were seven days in their journey from the Mascoutens to the Mississippi. This gave them 3 days upon the Fox and 4 upon the Wisconsin." The Relation of 1681 says: "it is only 9 days journey from their Great Lake (Green Bay) to the Sea," meaning by the Sea, the river which led into the Sea. Nicolet, according to Vimont, Relation 1640, had said that had he sailed 3 days more on a Great River which flows from the Lake, he would have found the Sea. The Sea referred to was probably the Mississippi River. The Lake is uncertain. The ideas of the geography of the rivers and lakes, and Sea, with Nicolet, were very confused. He was still under the delusion that the South Sea could be reached by going a little further on. This had led some to suppose that Nicolet went down the Mississippi to within three days of the Gulf of Mexico. This, however, does not relieve the matter. The language used by Marquette, is, "we knew that there was, 3 leagues from Mascoutens, a river emptying into the Mississippi; we knew, too, that the point of the compass we were to hold to reach it, was the south-west; but the way is so cut up by marshes, and little lakes, that it is easy to go astray, especially as the river leading to it is so covered by wild vats that you can hardly discover the channel.

Allouez seems to have found a village within one day's canoe voyage from Lake Buttes de Mortes, or at the junction of the Fox and the Wolf. Marquette found the village within 3 leagues of the portage. The question is whether there were not two villages; the one described by Allouez and the other by Marquette. The Mission of St. James was established in the village of the Mascoutens by Allouez in 1670. Marquette says nothing about this Mission, but he speaks of seeing a cross adorned with white skins, red girdles, bows and arrows, which the converted Indians had offered to the Great Manito. Marquette embarked in sight of all the village, as if the villagers were all interested in him. He, however, says that this was the last point which had been reached by the French. It does not seem probable that he is speaking of the same village in which Allouez had established his mission. The name Marquette is given to a modern village located on Lake Puckaway. This place has been visited by the writer and a series of Emblematic Mounds discovered near it. The locality near the portage remains to be visited. We have heard of mounds in that vicinity.

## BOOK REVIEWS.

*A History of Greek Literature from Earliest Period to the Death of Demosthenes*, by FRANK BYRON JEVONS, M. A.; 509 pages; New York; Charles Scribner's Sons; 1896.

This is a very interesting book, and for the popular reader one of the best upon the subject. The author goes over in a brief and comprehensive manner all of the questions in connection with the subject. The Homeric question is treated in a masterly way. The author believes that Homer was the author of the *Iliad* and the *Odyssey*. This brings up the question of writing and reading. He shows that writing was common in Greece as early as B. C. 700, and that the reading of books was a habit as early as B. C. 500. This does not however preclude the idea that Homer may have recited his poems before a select audience, such as the inmates of a palace, very much as the tales of the Arabian Nights were recited, continuing the recitation night after night until the poem was finished. Minstrelsy is known to have prevailed in the early part of the modern period of history, and so in ancient history. Epic Poems and Minstrelsy may have been associated. There is a correlation between the social cultus of the times and the style of the poem as well as the subject to which it is devoted. The author speaks of the military character of the *Iliad* and domestic character of the *Odyssey* as if they did not conflict with this idea. The different cords were played upon by the same minstrel. The Epic cycle is referred to. Proclus, who was the tutor of Marcus Aurelius is supposed to have made a summary of the different Epic poems and edited a work on the Homeric myths and poems. The author next takes up the subject of Lyric poetry, next the tragedies, and then the comedies. This finishes the first part. The second part takes up history and oratory and philosophy. The history of Herodotus, Thucydides and Xenophon; the oratory of Lysias, Demosthenes and *Æschines*; the philosophy of Plato, and reviews them all in a very interesting way. The book is one which we are happy to commend to our readers, for we are sure that they will be interested in it.

*Ancient Cities from the Dawn to the Daylight*, by WILLIAM BURNET WRIGHT. Boston and New York; Houghton, Mifflin & Co.; 291 pages.

The growth of Archæology and the increase of popular interest in it is illustrated by this book, which is really a series of sketches which would do for Sunday evening addresses for almost any church, although the author does not say that he has so used them. Mr. Wright disclaims any pretensions to a thorough knowledge of Archæology such as specialists are expected to have. Yet he is thoroughly posted in all the points of Oriental and Biblical Archæology, and is really better informed than many of the professionals. The book brings the subject of Biblical Archæology up to date. It refers to the discrepancies which have existed between the biblical account and the testimony of the monuments, and shows how they have disappeared under later investigations and discoveries. He refers to the history of Abraham and finds Ur of the Chaldeans, which he calls the city of saints; in the mound which was discovered by Mr. Loftus. He speaks of the seals of Sargon, whose time was fixed by Assyriologists at B. C. 3800. A monarch called Ur Bagas or Lighags, known as the builder, made Ur his capital and took the moon-god as the patron deity of the city. At this time Ur emerges into history. Her religion was a system of magic passing into polytheism. Abraham was called out of Ur on account of its idolatry. Nineveh is next considered. An inscription has been found written by the sovereigns who reigned there about the B. C. 1830. The most splendid period of Nineveh was subsequent to Tiglath Pileser II., B. C. 745. The streets were paved with blocks of limestone which show to-day the deep ruts worn by war chariots, 25 centuries ago. The Library of Assurbanipal is spoken of, and the old Accadian laws, the oldest code known in the world. Here was discovered the old Assyrian canon which makes it possible to certify dates. Babylon, the city of sensualists, is next considered and the difficulties about Belshazzar, whose name is mentioned in the bible, are cleared up, and Belshazzar's feast is rendered probable from the monuments. Memphis in the time of Abraham; the Sphinx in the time of Joseph, the mummy of Rameses II., (Pharaoh) in the time of Moses, are also described and many nice points are brought out in connection with their

history. And so we might go through with the volume. It is a charming book and worth double the price.

*Proceedings of the American Antiquarian Society from 1812 to 1886.*

This Society was organized in 1812; Isaiah Thomas as first President and virtual founder. The President gave to the Society his private library valued at about \$5,000, and 900 volumes from a library formerly belonging to Drs. Increase and Cotton Mather. Mr. Thomas, in 1819, built at his own expense an edifice for the Society. Gifts from all parts of the country began to pour in. Indian relics found their way into the cabinet. The library in 1886 numbered 60,000 volumes. The publications of the Society are as follows: *Archæologia Americana*, Vol. I, 1820; Vol. II, 1836; Vol. III, 1857; Vol. IV, 1860; Vols. V, VI, 1874. Since 1849 the Proceedings of the Society have been regularly printed, and form quite a library of themselves. The membership is restricted, can at no time exceed over 140, although there is no limit to the election of foreign members. Among the notable names may be mentioned Hon. Emory Washburn, Hon. Geo. Bancroft, Rev. Edward E. Hale, Hon. Geo. P. Marsh, Hon. John L. Motley, Brantz Mayer, Hon. Lewis H. Morgan, Francis Parkman, Esq., Dr. D. G. Brinton, Robert Clarke, Dr. F. V. Hayden, and others.

This Society published Caleb Atwater's *Antiquities of Ohio*, Albert Gallatin's *Synopsis of the Indian Tribes of North America*, Hennepin's *Account of the Discovery of the Mississippi*, and a description of the Ruins of Copan in Central America by Col. Juan Galindo. In 1850, Dr. I. A. Lapham was employed by the Society to survey the mounds of Wisconsin and under its auspices the celebrated work on the *Antiquities of Wisconsin* was published by the Smithsonian Institute. These various works constitute the foundation of the science of Archæology in America. To them should be added the first contribution of the Smithsonian Institute entitled the *Ancient Monuments of the Mississippi Valley* by Squier & Davis, June, 1847. The fourth contribution, which embraces Whittelsey's *Description of Works in Ohio*, and the sixth contribution entitled *Systems of Consanguinity and Affinity of the Human Family*, by Lewis H. Morgan, published in 1871. The Proceedings of the Society contain many very valuable papers. Among them should be mentioned several by the late president, Stephen Salisbury, Esq. Mr. Samuel F. Haven, former librarian, while living, gave an annual review of the Progress of Archæology. His papers are now very valuable and reflect great credit upon him as a diligent student, sound thinker, and clear writer. The personal memoirs contained in the annual proceedings are very interesting and make us acquainted with the different members of the Society. The members of this society have always taken delight in the mutual acquaintance secured by their association and the care with which the selection of members is made, always enhances the pleasure. The reprints which have been issued by the Society are numerous. They embrace papers on Archæology and Ethnology by such writers as Philip Valentini, Ad. F. Bandelier, Prof. F. W. Putnam, Stephen Salisbury, Jr., and Augustus L. Plongeon. No other Society outside of the Ethnological Bureau at Washington, has published so many works on Archæology.

The topics treated have been varied. In the early history of the Society, the mounds and mound-builders, and the Indian Tribes and Languages. In the later volumes, the antiquities and races of Central America have received especial attention. There are some popular subjects which ought to come under its notice. Among them we would suggest; 1. the names of towns, cities, and rivers at the West which have been derived from the Indians. 2. the location of Indian villages. 3. Routes which the various travellers through the west took, and the exact location of the mounds, villages, and other objects of antiquarian interest which they have described, with a view of ascertaining whether any of them can be discovered at the present time. 4. The location of the forts at the west designed as a protection against Indians. 5. The exact location of the French and Indian towns. The prehistoric map of the western country will, we fear, not be made before the tokens of the prehistoric times are lost. This is a work which neither the Ethnological Bureau or the Peabody Museum have taken up. It is a subject which commends itself to the patriot, the historian, as well as the Archæologist. We are personally grateful to this Society for a complete set of its proceedings.

THE  
*American Antiquarian.*

---

VOL. IX.

MARCH, 1887.

No. 2.

---

*Part 4. v*

WHO WERE THE EFFIGY BUILDERS? TO WHAT  
AGE AND RACE DID THEY BELONG?

TENTH PAPER. *o*

In drawing to a conclusion the articles upon the Emblematic Mounds, we propose to consider the question who were the Effigy Builders? This is not an easy question to answer, and we do not expect to answer it in any positive or indisputable manner, but merely propose to give suggestions, and leave our readers to draw their own inferences. It is not likely that, in the absence of all tradition or reliable knowledge on the part of the Indian tribes who have dwelt here since the advent of the white man that any one will arrive at complete certainty in this matter. Opinions will differ even if we give all the evidence that is possible for from the same data, different persons will draw different conclusions and there is no positive proof possible. We go over the ground laying down certain foundations and then leave others to build on them as they may. We now take the position that the effigy builders were different from most of the tribes which were located here after the time of the discovery; that they did not belong to the Algonquin race. We do not know whether they were a people related to the Dakotas or Sioux, though it sometimes seems as if they were. It is a singular fact that nearly all the Algonquins found in the state of Wisconsin belong to tribes which migrated into the state after the discovery by Columbus, and their migrations have been traced by different writers.

The Dakotas are supposed also to have been recent immigrants for they have traditions among them of their migrations from the far East, and some think that they were formerly located on the Ohio River and built the mounds there, and were driven out by



the Iroquois. There are, to be sure, a few among the Algonquin Indians who maintain that their ancestors built the effigies. The writer has had conversation with the son of the old Indian chief Oshkosh and put this inquiry to him. He said that the Menomonees built the mounds as tribal records and to mark places where they had had battles. On saying that the effigies were not on the Menomonee Territory he answered they are all over and all the tribes built them. This is the nearest to a tradition about the effigies that we have been able to get; and this probably had reference to the common tumuli rather than to the effigies. There is a blank page on which we can find neither history nor tradition. The only record is written in the hieroglyphics and symbols. The effigies themselves furnish the only clue. If the land was occupied before these tribes came it will be only ascertained from the study of archæology. But archæology at present gives no definite information in reference to it. Our study of the subject will be mainly confined to the testimony given by the mounds themselves.

I. The succession of races. One of the first things which we learn from the history and earth works is that there has been a succession of races on this soil. We should know this from history, but archæology confirms it. The study of the mounds proves that there has been a succession. Whether a succession of tribes or races who built effigies, is uncertain, but that there was a succession of tribes who built mounds and other earth works, will, we think, be easily proven. Dr. Lapham maintained that there were four different periods of occupation, as follows:

1. The later Indians, those who were encamped at various points after the settlements began.
2. The earlier Indians who made graves, and built the cornhills which are so common in the state.
3. The people who made the garden beds.
4. The effigy builders.

We maintain that the conical mounds give evidence of a succession of races. There is a difference between the tumuli, some of them having been built by later Indians, some of them by earlier tribes and probably some of them by the effigy builders themselves. The tumuli were frequently used by successive tribes, the same mound containing the skeletons at two or three different depths which were deposited at different times. There is quite a difference between the tumuli in their external appearance; some of them are very massive, about 50 feet in diameter and 10 or 12 feet in height, others are much smaller, varying from 15 to 30 feet in diameter and 5 and 8 feet in height. We propose to give a description of various localities where tumuli have been examined and where the evidences of different periods of occupation are given by them.

1. The first place to which we shall refer is at Prairie du Chien.

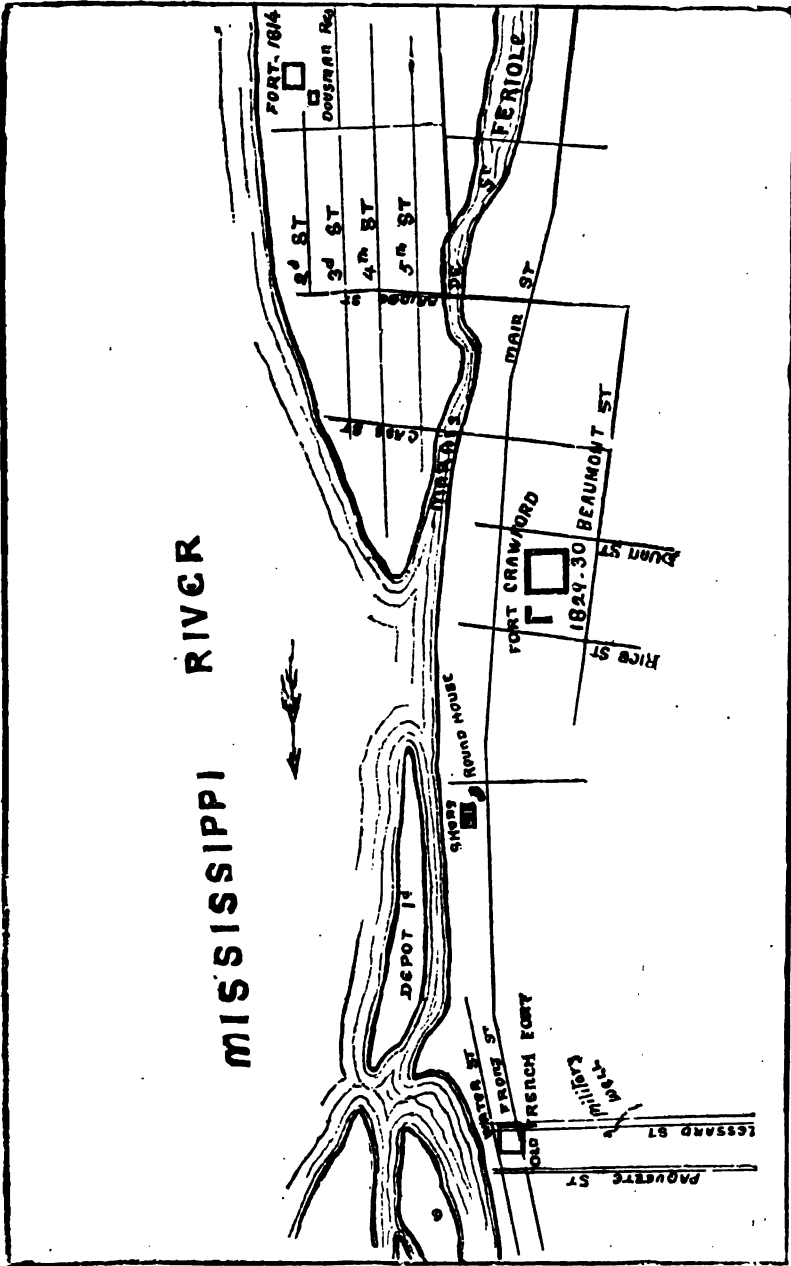


Diagram IX.—MAP OF WORKS AT PRAIRIE DU CHIEN.

Here there is a great variety of earth works. In the first place the Old French Fort is in the shape of an earth wall and has been mistaken by some for a work of the effigy builders. It was a stockade and the wall does resemble some of the long mounds which were left by the effigy builders. The presence of chimneys and a well and other modern tokens would prove it to have been built by the white settlers. The employees of the Bureau of Ethnology have, at different periods, excavated mounds. In one, little hawk bells were found and other tokens of contact with the Whites. These hawk bells were probably introduced by the French. The mound was near the site of old Fort Crawford and was evidently erected by modern Indians. There are many large mounds on the prairie both north and south of the city. The most of them have been dug into, and relics have been taken out from many of them. These relics are such as are peculiar to the Mound Builders which the Indians have long since ceased to possess. The writer has seen some very beautiful specimens of spear heads, scalping knives, and other implements which were taken from mounds three miles south of Prairie du Chien; Mr. Beach, of Prairie du Chien, and Mr. Derby, of Wyalusing, have in their collections a number of these relics. Others may be seen in the Davenport Academy having been placed there by Capt. Hall. Here then we have the tokens of at least three periods of occupation; a. those connected with Ft. Crawford; b. those erected by the Indians who gathered about the Old French Fort; and c. those which were erected by an earlier tribe of Mound Builders. Beside these there are effigies and round mounds which were evidently erected by a still earlier race. The effigies and round mounds connected with them have not been excavated, the object having been with all to collect relics and not to gather information about the effigy builders. The location of the Fort and the mounds connected with the Fort will be seen from the cut which has been furnished by the Historical Society of Wisconsin. [See Diag. 1X.] The mounds yielding the most interesting relics are not upon the map. There are, however, tumuli on the island near Mr. Dousman's place. The map illustrates the fact that different periods of occupation may be traced by ruins, earth works, debris, as well as by mounds for we have on it the tokens of three separate white races, namely the Old French Fort, the Fort occupied by the English in 1814, and Fort Crawford which was built by the Americans in 1829.

2. Another place where tumuli have been excavated is the one mentioned by Mr. Moses Strong. [See Fig. 143.] One group visited by Mr. Strong was situated on the bottom lands of the Mississippi River. It contained evidences of intrusive burials. He thought that the mounds might have been built by recent Indians. The other group was near the Wisconsin River. It contained round mounds and effigies. The effigies were excavated

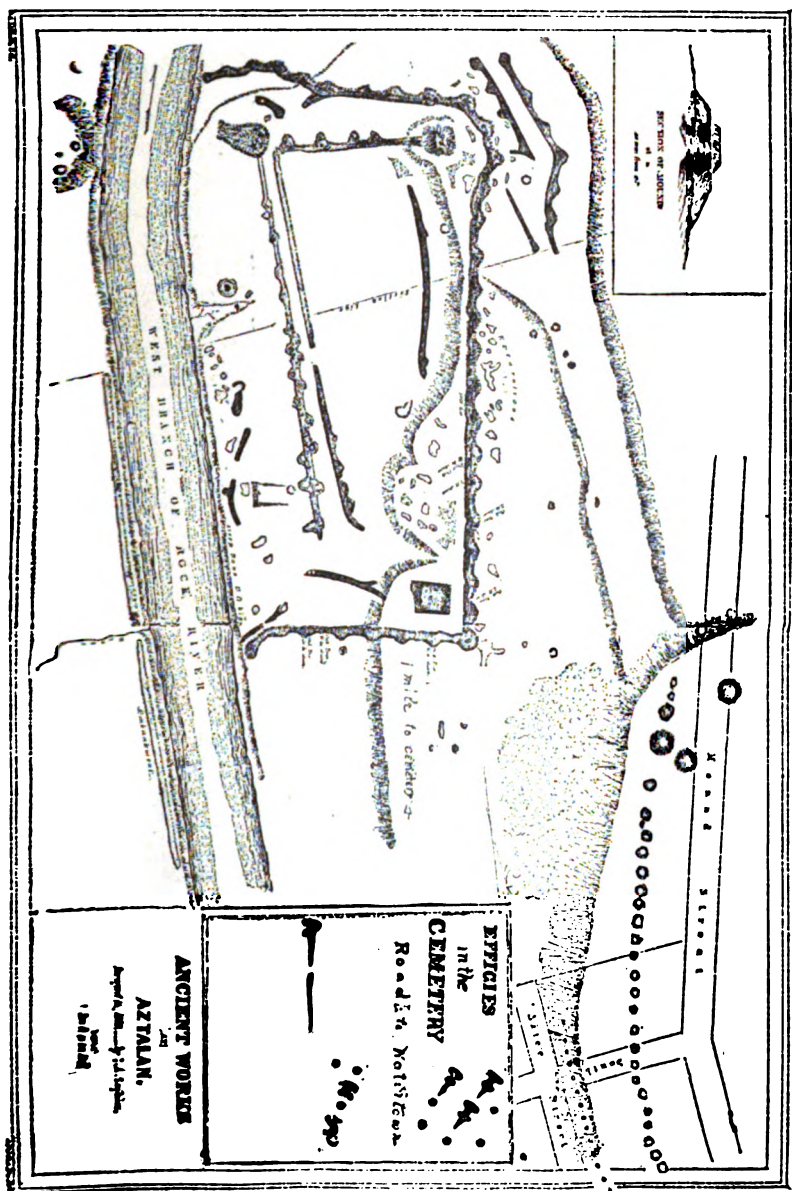


Diagram VII.—MAP OF AZTALAN.

but yielded no relics. The round mound contained what he thought was the skeleton of a Mound Builder.\*

3. Another place where mounds furnish evidence of different periods of occupation is at Madison. There is a group of effigies, long mounds, and round mounds, on the north shore of Lake Mendota. The group extends the whole distance from land east of the Asylum, across the Asylum grounds, and across the farm west of the Asylum; and is composed of a great variety of effigies. On a high hill overlooking the lake is a cluster of conical tumuli around which effigies may still be seen. These tumuli have been excavated and have yielded relics. One of them has been described by the author and is shown to have been a sacrificial place as it contained a large altar at the base. Another is referred to here as it was found to contain two burials, one above the other, and so shows that there were two periods of occupation. We furnish a cut which was prepared for Dr. J. N. De Hart, and quote from his description. [See Fig. 146.] It will be noticed that the skeletons are all in the sitting posture. The same posture as described by Moses Strong as seen in the mound in Grant County. The lower skeletons were probably the original Mound Builders. The upper skeleton may have been that of a later Indian.



Fig. 145.—PESTLE FROM MOUND.

The following is the order of the burials:

1st. A deposit of ashes, charcoal and decayed wood, 2 feet below the surface; skeleton of an adult, 3 feet below the surface, covered with loam very compact and hard.

2nd. A layer of earth and a course of stones, ashes, charcoal, decayed wood, crust of clay baked, and a cavity 6 feet long, 2 feet

\*"It occurred to me that the circular mound might have been stamped or rammed, perhaps for the purpose of protecting the corpse against the attack of prowling animals. I do not think that the most skeptical person could regard this as an intrusive burial. The mound precisely resembles all others in this vicinity and in other different localities which we are accustomed to attribute to the Mound Builders." Sm, Rep. 1876—p. 428.

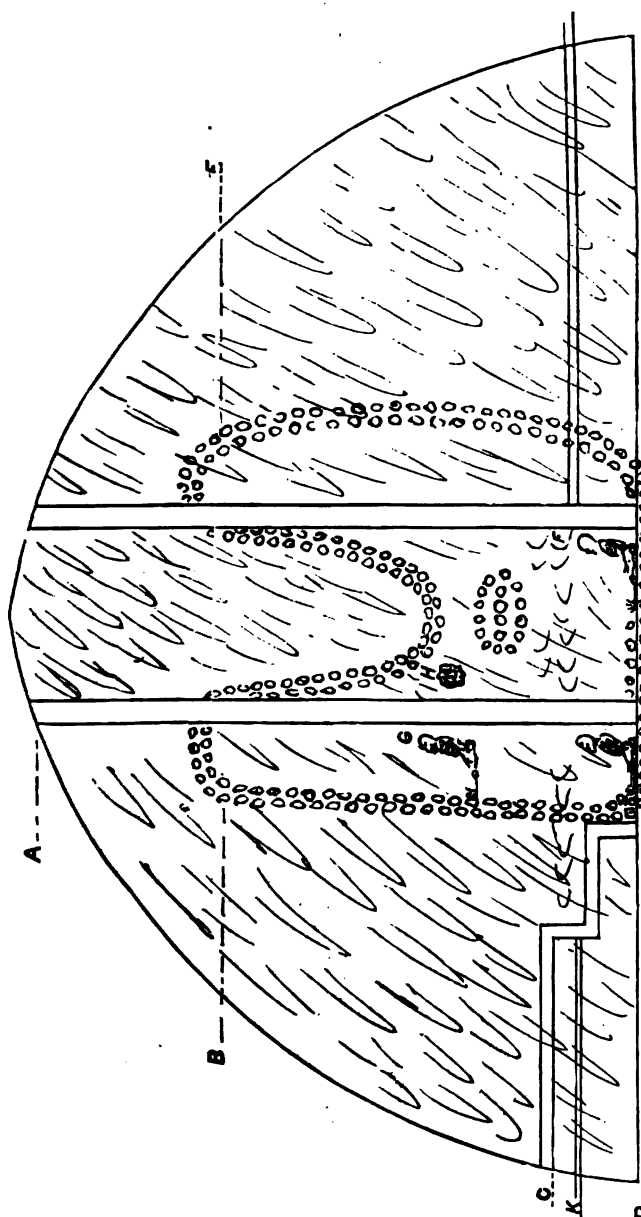


Fig. 146.—BURIAL MOUND ON NORTH SIDE OF MENDOTA.

DESCRIPTION AND ORDER OF THE BURIALS.—A. Perpendicular shaft. B and F, Groups of stones found by the excavators 5 feet below summit; next a layer of yellow clay about 4 feet deep. C, a drift made into the side 3 feet above the ground K. D, bottom of the mound consisting of a bed of yellow clay. G, skeleton with perforated humerus, pieces of pottery and a stone implement. H, stones, ashes, charcoal and decayed wood. F, two skeletons, one of a child six years old, the other of an adult; found with pieces of pottery and two stone implements,  $1\frac{1}{2}$  feet below the surface of the ground.

wide, but no skeleton in it; near the center of the tumulus the skeleton of a child, pieces of ancient pottery, and a stone hammer.

3rd. Near the bottom of the tumulus an adult Mound Builder in a sitting posture, and below this, stones which had been exposed to fire, ashes, charcoal, decayed wood, and a flat discoidal relic.

Dr. De Hart found in the companion burial mound spoken of above, a stone pestle. The altar was  $3\frac{1}{2}$  feet below the surface of the ground, the pestle was  $2\frac{1}{2}$  feet from the summit of the mound. [See Fig. 145.]

4. Another place where tumuli have been excavated is at Lake Koshkonong on the south west side between Taylor's Point and the village of Newville. Here there are three groups of tumuli about a mile apart. They were excavated by Mr. W. P. Clark in 1874.\*

The following is the record given by Mr. Clark:

1st. A mound at the foot of Koshkonong Lake, 13 feet high, and 75 feet in diameter. [See Fig. 147.]

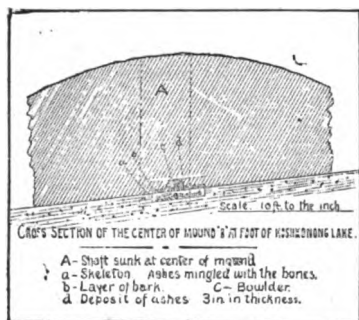


Fig. 147.

situated on a hill top. Mr. W. P. Clark found in one of these mounds a cavity containing a skeleton. He thinks that they were erected by Indians. There are near them in the low land near the water shell heaps and fire beds marking the places, where the Indians had camped. [See Fig. 148.]

3rd. The third group is also situated on a ridge but nearer the water. The

mounds are not so large horizontally but are higher. Some of them have been excavated. In one of them was found a copper knife, in another several skeletons.

4th. Several conical tumuli were excavated by Mr. W. P. Clark

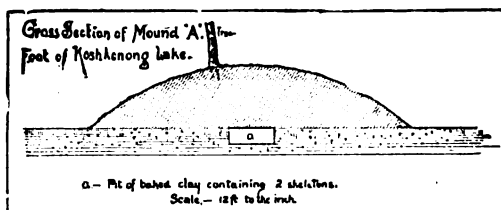


Fig. 148.

\*See Amer. Antiq.—Vol. VI—No. 5 p.

near Indian Ford. This is the place where there is a game drive. One of them contains two burials an upper and a lower. The earth composing it was very compact. The upper burial consisted of three skeletons in a recumbent posture; the lower burial consisted of 7 skeletons; the bones were thrown together as if it were a bone burial. One of the skeletons contained a stone arrow-head imbedded between the two lower lumbar vertebrae. A perforated stone amulet was found with the skeletons. This

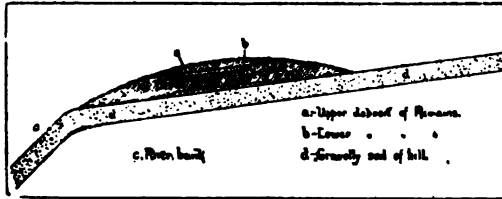


FIG. 149.—BURIAL MOUND AT INDIAN FORD.

mound may have been erected by the effigy builders, or at least the lower burial was probably by them. [See Fig. 149.]

5. Another place where mounds have been excavated is at Beloit. Here there are effigies and round mounds, the common effigy being the turtle. The mounds on the college campus are common tumuli. One of them was excavated a number of years ago and yielded bones but no record was made of it. There is a group of effigies and round mounds near the waterworks a mile north of the college campus.\*

Two of the effigies have been excavated and a record made. One by Col. C. Heg in 1870, the other by the writer in 1886. The record of the first was made by Prof. S. Eaton.

The report of the last has been furnished by the author to the Ethnological Bureau. Effigy mounds do not often contain burials and we therefore make especial mention of these.

A description of these effigies will therefore be given. *a.* The group is one out of many which are found in different directions from the city. All of them contain the effigy of the turtle. The clan emblem was the turtle. *b.* The situation of the group was such as to lead one to expect it to be a burial place. It was on the bluff overlooking the river, not far distant about a mile from the group on the college campus. *c.* The arrangement of the mounds in the group would indicate that it was not a game drive or a village; possibly the village was upon the college campus. *d.* The burial was upon the surface of the ground. Eight bodies were laid in a line along the central axis of the effigy but were diagonal to the line. *e.* The bodies were buried with the ground very compact but with no evidences of cremation. *f.* The skeletons were arranged as if the burial had been a bone burial; the lower bones of the legs and arms were placed along side of the upper bones, and the skull was placed upon the thorax. *g.* The mound was not stratified but was made up mainly of black loam. *h.* There were no implements of any kind. The bones were much

\*See map of works at Beloit; they are here called Dugway Mounds.



decomposed, showing that the bodies had been buried a long time. We take the ground that the effigy builders used the semblances of animals as their totems just as the later tribes use painted and carved wood over the graves of their dead, and in this consists the difference between the earlier and the later races.

6. Another place where mounds have been excavated is at Rock Lake and at Aztalan. The mounds at Rock Lake on the west side near Lake Mills, were small conical tumuli about two feet high, 12 and 15 feet in diameter. There are about 100 of them. Skeletons have been taken from them and forwarded to the Medical Museum of the U. S. Army. These were evidently the skeletons of Indians quite recently buried. The skulls were mainly those of squaws. There are effigies and conical mounds on the east side of Rock Lake but they have not been excavated. The mounds and walls at Aztalan, 3 miles east, are evidently ancient. Skeletons have been taken out from these mounds.

Dr. Lapham excavated mounds at Aztalan; he found the evidences of several periods of occupation. He says, "rusty gun locks and pieces of iron, copper, and brass have been found in the neighborhood. I excavated one of the tumuli outside of the enclosure and found that a post had been inserted in the mound. This post may have been the remains of a medicine pole. According to Mr. Catlin, the Mandans were in the habit of erecting mounds of earth near their villages, around which were arranged in circles the skulls of the dead, after their bodies had decayed on the scaffolds. On each mound was erected a pole hung with articles of mysterious and superstitious import." [See Diag. VII.]

7. Mounds have been excavated near Rush Lake and near Green Lake. The first by a company of students from Ripon College. The second by Mr. Thomas Armstrong. One of those excavated by the students contained bones thrown in indiscriminately, another, a pit wherein bones had been thrown; and another a pillar or pile of large stones or boulders. There were no effigies in this group. The mounds described by Mr. Armstrong were effigies, and belong to the group which we have described as a village site.

Here then, are two races who buried in mounds. In the same vicinity at Green Lake there are corn hills and a ring where was a dance ground belonging to modern Indians. [See Diag. VIII.] On the opposite side of the lake on Sec. 27 there are conical mounds. This is still a favorite place of resort with the Indians.

Mr. Thomas Armstrong has described the skulls which were exhumed from the group at Rush Lake, among which there were no effigies; evidently a group erected by a later race than the effigy builders. He says, "the skeletons were in a good state of preservation and the skulls were more like those of the common Indians; very narrow across the eyes. The forehead slopes rapidly up, the great bulk of the head and by far the highest part

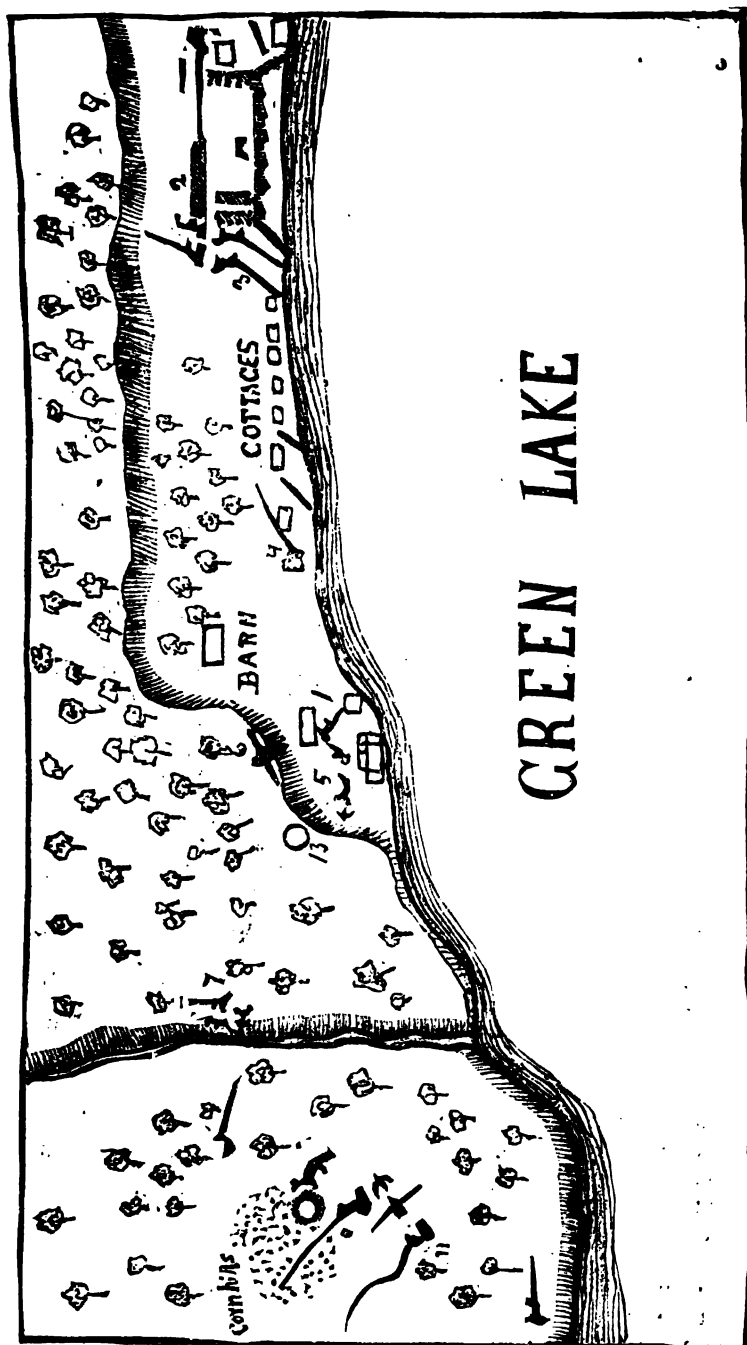


Diagram VIII—MAP OF GREEN LAKE.

was back of the coronal suture." "The general characteristic of the skull was the low and narrow forehead." Here then we have two types of skulls and two races which built mounds, the one the effigy builder, and the other a later people. Other persons have noticed the difference. Some have even undertaken to show that the effigy builders were much lower in their organization. The effigy mound excavated by Mr. Thomas Armstrong was near Green Lake. A skeleton was found near the neck of the effigy but the bones were nearly decomposed.

Mr. Mitchell, of Green Lake, has excavated many mounds in that vicinity. He has found specimens of pottery which show very delicate and complicated patterns. These may have been the work of effigy builders. He has a large number of very rude stone relics picked up on the north shores of Lake Puckaway. These resemble the argillaceous relics of the gravel beds of Trenton. It is not known whether they were left by the effigy builders or by the modern Indians, but

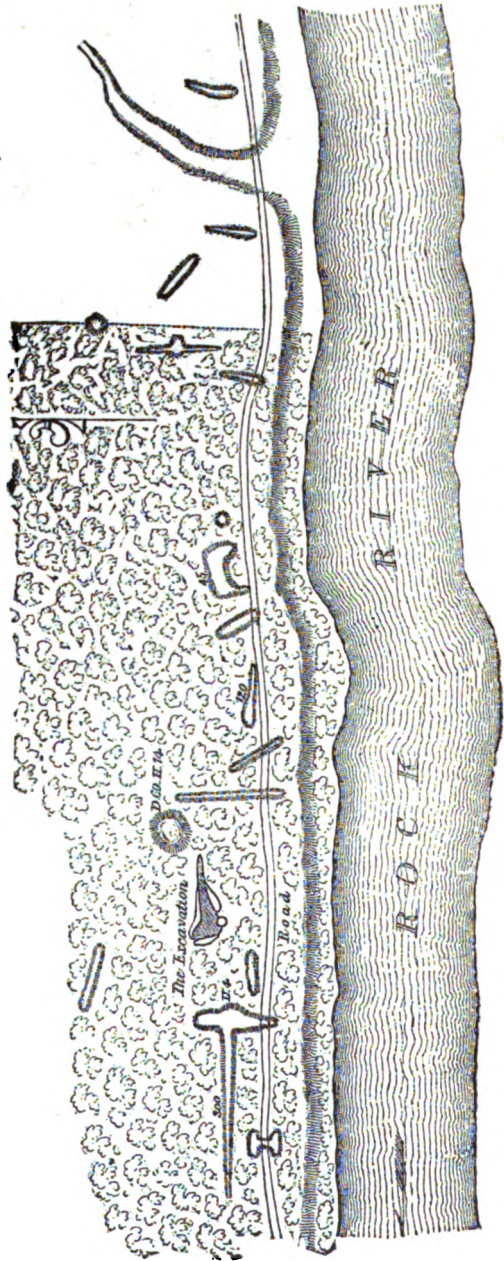


Fig. 150.—EFFIGY MOUNDS AT FT. ATKINSON.

they are interesting as showing what a variety of relics are found on the same territory.

8. "At Fort Atkinson large burial tumuli have been opened; one 10 feet high, and 60 feet in diameter. The graves of Indians were found in penetrating this mound." This is the place where an intaglio mound, a lookout or conical mound accompanying it, a bear effigy and several other animal mounds were discovered by Dr. Lapham. [See Fig. 150.] The group is connected with the large mounds referred to above. This group consisting of the conical mound, long mounds, intaglio or excavated effigy bird mounds, and bear effigy, may have been designed as a game drive or a place for hunters. It was, however, in the midst of a cornfield and in this respect resembles a group of effigies at Indian Prairie north of Milwaukee. It furnishes another case where effigies and corn hills are associated.

Dr. Lapham speaks of these mounds as follows:\*

"It will be remarked that, in opening mounds and penetrating to the original deposits, but few implements or ornaments of any kind are found. In this respect, the Wisconsin mound builders differed from their successors who are in the habit of burying articles of supposed value and utility with their dead; and from this fact it may perhaps be inferred that they had less material notions of the spirit world, or at least of the necessities of those who were on the journey to that happy land."

9. Waukesha is another place. Here Dr. Lapham found relics in a tumulus. We have already quoted his remarks.† He says:

"Here the stone cist was 2 feet below the original surface and the mound was erected over it. It is evident that it was not an original burial but a tumulus of a later race of mound builders.

The effigy builders are not known to have placed their dead in cists but generally packed, the ground about them, and made their bone burials in pits or upon the surface of the ground. The pipes, red paint, and pottery in this cist show that it was a late race that built the mound and not the effigy builders. The bones were much decayed, "but it is believed," Dr. Lapham says, "that their antiquity could not be very great."

We furnish a cut of the turtle mound at Waukesha, described by Dr. Lapham. The shape of the effigy will be noticed, and the burial place of the later Indians will be recognized. The difference between the two races will be readily seen from this cut. The Indians marked the graves in the rudest manner by placing sticks over them, but the effigy builders marked their abode by erecting elaborate clan emblems in the shape of effigies. See Fig. 151.

10. A series of conical mounds formerly existed near Berlin, on the north side of the Fox River. A body was found in one of these;

\*See Lapham's *Antiq. of Wis.*, p. 36.

†See Ninth Paper, *Amer. Antiq.*, Vol. IX, No. 1, p. 16.

the body of a child. Near it was a pottery vessel about 6 inches in diameter; and in the mouth of the vessel was another smaller pottery bowl in which it was said sweet meats had been placed. This was evidently an Indian burial.

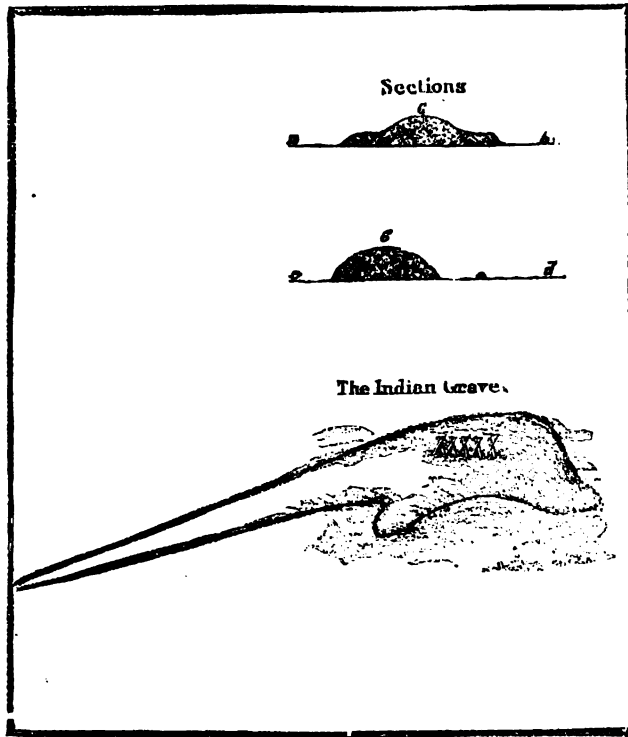


Fig. 151.—TURTLE MOUND AT WAUKESHA.

Rev. Stephen Bowers excavated a number of conical mounds near Baraboo in 1880 and found what he thought gave evidence of cremation. These conical tumuli were near a group of effigies and may have been the burial place of effigy builders.

11. At New London, on the Wolf River, there are graves which are known to have been built by the modern Indians; also corn hills over which a young forest has grown; a series of burial and long mounds formerly existed here; three classes in all. Many relics have also been found. Old gun barrels among the corn hills; skeletons from the mounds, pockets containing copper knives in the rocks on the side of Mosquito Hill and in the lime stone ridge adjoining.

12. At Montello, during the year 1886, a party consisting of Mr. McDonald and Eben Fox exhumed four skeletons from mounds on the banks of Buffalo Lake, one of the skulls had been penetrated by the point of an arrow which remained extending

half an inch on the inside and remained imbedded in the bone.\* The skeletons were well preserved, though the skull in some respects resembled those taken out of the mound by Mr. Clark at Koshkonong.

There are a few other places where effigies have been explored, but the same results were reached. At La Crosse, Mr. F. W. Putnam excavated an effigy mound. He says that "the mound had been reduced by long continued trampling of beasts and men, and it may have been dug into in the past as only a portion of the bones of the skeleton were found."† He however refers to the group of effigies at Baraboo, and speaks of the conical mounds which had been excavated there, and concludes that many of the groups were designed for burial places. He compares the effigies to the "Pumas" cut from stone mentioned by Bandelier as found on a hill in New Mexico which are connected with the ceremonies of the Pueblo Indians, and to the animal and human forms cut in stone found in portions of Mexico. "The transition is easy from these to the combination of similar forms with the architectural ornaments of the large buildings of Yucatan, where pumas, serpents, birds, and human forms abound. The study of the effigy mounds of Wisconsin in connection with their descent from a higher type will prove interesting especially to those inclined to the theory of the south-western origin of the mound-building nation." In reference to this we would say that the burials do not indicate difference enough between the effigy builders and the later Indians, to warrant any such conclusion. The theory was advanced at an early day that the Aztecs went from this region to Mexico, but this has been rejected. All that we can say is, that the effigy builders were very much like the later Indians, but built the effigies for their clan emblems, and as a general thing buried their dead without relics.

We have dwelt upon the subject of burials for the reason that they not only show a succession of races but prove that the effigy builders were the earliest of all.

The burials were not uniform; some of them were in a sitting posture, some of them recumbent, and some were bone burials. The modern or later tribes of mound builders seem to have practiced single burials with the body in a sitting posture, but the earlier tribes buried a number of bodies together, and mainly in a recumbent posture. The effigy builders seem to have practiced bone burial occasionally, but were not confined to it. Where they buried in an effigy, or with an effigy over the place, we may suppose they made the effigy to correspond with the clan emblem of the region. These are the conclusions we have drawn from such facts as have come to hand. A succession of

\*See Amer. Antiq., Vol., VIII., No. 5, p. 298.

†See Proceedings Amer. Antiq. Soc., Oct. 22, 1883, Vol. III., Part I, p. 4.

racess have followed one another here, but only one of them built effigies.

II. We come next to the subject of the differences in the races or tribes. The question is, were the effigy builders in any way different from the people who succeeded them. This is not to be confounded with another question which has been broached by Dr. Cyrus Thomas: "Were the mound builders Indians?" In the succession of races all may have been Indians, but the difference in the Indians is the point of inquiry. The answer to the question will be found mainly in the study of the relics and remains, and especially of the skeletons and skulls.

We turn then to the study of the relics with a view of ascertaining who the effigy builders were. It should be said, however, that there are few implements which can be identified as having belonged to the effigy builders, as relics are not often found in the effigies. Dr. Lapham explains this by saying that they had very different ideas of the nature of the soul from the later Indians, but our explanation is that the effigy builders practiced bone burial. If they did it is not likely that they would deposit implements in the grave with their dead. They first placed the bodies upon platforms or in houses and afterwards buried the bones with great ceremony. There are relics, however, which can be identified as belonging to this people, and to these we call attention.

1. The skulls and skeletons of the effigy builders are worthy of notice. Descriptions have often been given. We call attention to two which are exceedingly suggestive, namely, the skull found by Mr. W. P. Clark at Indian Ford, and the one exhumed by Dr. J. P. Hoy at Racine. We give a figure of the first. [See Fig. 152.] The figure of the second can be found in Dr. Lapham's book.\* *a.* It is a noticeable fact that both of these skulls came from mounds



Fig. 152.—SKULL OF AN EFFIGY BUILDER.

which had evidently been erected by the effigy builders, and from the lowest depth in the mound. There were, to be sure, in both cases, conical mounds which belonged to the later races, but the impression formed by the gentlemen who discovered these skulls, was that they were digging into an original mound builder's grave, and that they had come upon a genuine

\*See *Antiquities of Wis.*, Pl. LIII.



mound builder. Dr. Hoy's description is as follows:\*

"The works situated on the bluff consists of 3 lizards, 1 cblong, 6 conical tumuli and 3 enclosures. I opened one of the lizards but found nothing. We excavated 14 of the mounds, most of them contained more than one skeleton, and in one instance we found seven. The primitive crania were crushed and flattened. In two instances I succeeded in restoring the fragments to their original shape; one of them is represented.

"In regard to the antiquity of the works at Racine it may be stated that on the mound from which I obtained the pottery, there

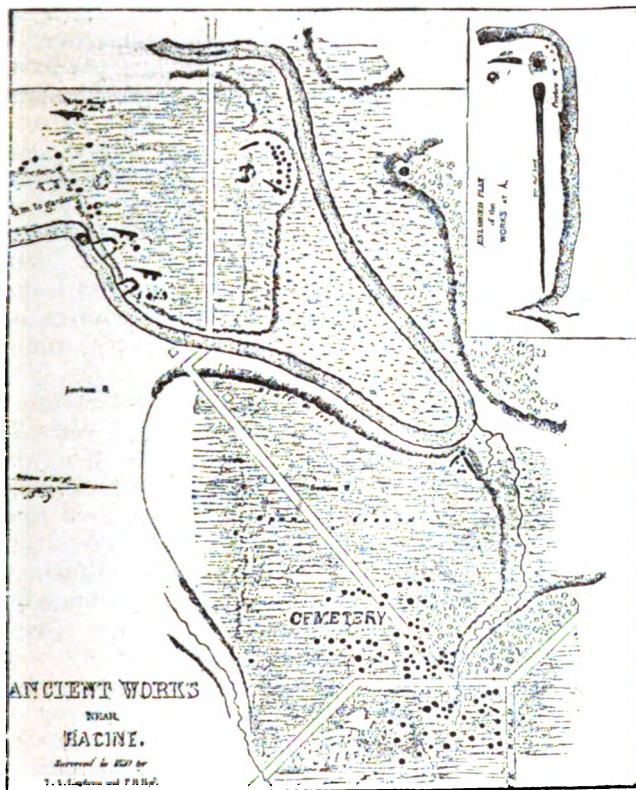


Fig. 153.

was a burr-oak stump which contained 250 rings, and the tree was cut ten years since, when the land was first occupied. Near this I excavated another mound on the center of which were the remains of a large stump which must have been much older. Immediately under the center of this stump I obtained the cranium before mentioned. A stump on the long mound has 310 rings; and near by are the remains of a large tree, and an oak stump five feet in di-

\*See *Antiquities of Wis.*, p. 10.



ameter. These facts indicate an antiquity of at least a thousand years."

*b.* In comparing the two skulls, the one exhumed from the mound at Indian Ford, with the one at Racine, the impression is gained that they both belong to the same race and were both the mound builder type. This is the impression formed by Mr. Clark. He has given the dimensions and measurements of the skull as compared with that of a probable Indian of a later tribe. The facial angle of this is  $75^{\circ}$  and the other  $85^{\circ}$ . The length of the occipito-frontal arch is 14 inches and the other 15.30 in. Both skulls are very remarkable in their appearance. This description of the skull and its surroundings is instructive. *c.* We should judge from the examination of the mounds in the region that there were two races who had buried here; one making their burial place where the cemetery is at present, west of the river, the other on the isolated bluff north and east of the river and cemetery.\* See Fig. 153. Dr. Hoy makes a good point in reference to the mounds in the cemetery. He says, "the mounds with unusually steep sides are of recent origin, time not having leveled them down as much as those of greater antiquity." The same is true of mounds which were excavated at Lake Koshkonong. Those which were used for modern relic burials have very steep sides; and those which have been taken to belong to the original mound builders are much flatter. *d.* Another point is also worthy of notice. As a general thing the skeletons and skulls are much older in their appearance when found in the effigies than when found in the small conical mounds. Such was the case here. *e.* Dr. J. W. De Hart makes a point in connection with the skeletons which he exhumed at Madison. He says that they presented two features peculiar to a low order of people; the perforation of the humerus and the flattening of the shin bones; peculiarities which belong to the animals such as the anthropoid apes. His conclusion, however, we do not accept. The perforation of the humerus may be found to exist in the chimpanzee and ape, but it does not prove that the mound builders were of a low grade. The platycnemic feature is found among all the hunting races. All that can be proven from this fact is that the effigy builders were hunters. On this point we should disagree with Dr. De Hart and say that though the races are different, yet there is no evidence of inferiority in the effigy builders.

2. We turn next to the relics and remains found in mounds as compared with effigies. We have maintained that the round mounds were erected by a later race and we are to examine the relics to prove this. One proof is that these contain relics but the effigies do not. Another is that the skeletons and skulls are much better preserved. Still another is that in these mounds occasionally modern implements are found. We have already gone

\*See Sixth Paper, Amer. Antiq., Vol. VII., No. 1, p. 29.

over the different localities where such mounds have been excavated and where relics have been discovered.

The typical relic or implement of Wisconsin is the stone axe with a long blade and a deep groove. There are many such axes found in the state, some of them showing signs of long use. The banner stones and maces, and mound builder's pipes may be typical in Ohio, but these are typical relics in Wisconsin. [See Figs. 154 and 155.]

In reference to all the relics, it may be said that there are many evidences of aboriginal trade. Nests of leaf-shaped implements from the Falls of the Ohio and from Flint Ridge near Newark, have been found in the state. Obsidian cores or blocks which probably had been brought from the Rocky Mountains, have been exhumed from the mounds. Pieces of mica from the mines.



Fig. 154.

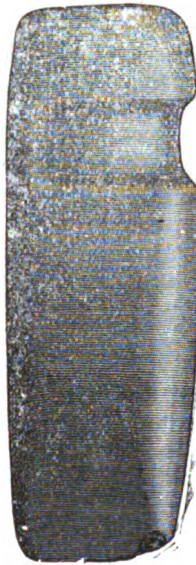


Fig. 155.

in South Carolina and sea-shells from the Gulf of Mexico have also been seen. Some of these may have belonged to the effigy builders, though they are, as we have said, very seldom found in the effigies.

3. We next take up the copper relics of Wisconsin and examine them with the view of ascertaining whether they were the products of the effigy builders or were left by the later races. This is an important point, for it helps to determine the social status of the effigy builders. These two have generally been associated. The effigies and copper relics are the distinguishing peculiarities of the State, but the question is whether they are to be associated.

The archæology of Wisconsin differs from that in other states, in that the copper implements are so abundant. It is probable that no State in the Union has yielded more copper tools than this. There are large collections in the cabinets of the Historical Society at Madison and of the Academy of Science at Milwaukee. These collections have been mainly made by Mr. F. S. Perkins. He claims that he has never found a copper relic in an effigy mound, though many have been found in the immediate neighborhood. A large majority have been plowed up in the field, some of them from a very considerable depth. They are made, he thinks, from the copper nuggets which are found in the drift and from the copper taken out from the mines in Lake Superior. The relics sold by Mr. Perkins do not determine the point.

The connection between the copper relics and the effigies seems to be quite uncertain. We have learned of one copper knife having been taken out of a mound at Koshkonong. The mound, however, was one of a group which we have considered modern. All in the group are conical tumuli with steep sides and contain recent burials. A mound at Prairie du Chien was excavated by Messrs. Hall & Derby, and yielded obsidian cores, an oil stone scalping knife, a very beautiful spear-head, and several large copper beads, or rather wooden beads covered with copper.

The exploring party under the Bureau of Ethnology, excavated a group two miles south of the city of Prairie du Chien, called the Flucke group; the group previously excavated by Hall & Derby. In this group, obsidian spear heads, copper beads, two spool-shaped copper ornaments, a copper bracelet, and a close coiled wire were found, the wire and bracelet supposed to be an intrusive burial. The Vilas group, which we have before described as belonging to the effigy builders, was also excavated but no relics were discovered. The writer says: "the bodies had been removed for a general burial at some other place."

These relics we have spoken of as being older than many others, but as probably not belonging to the effigy builders. This uncertainty in reference to the copper relics having belonged to the effigy builders is increased by the fact that copper relics have been found in cliffs many miles distant from any groups of effigies. The line which bounds the habitat of the effigy builders, is found somewhere in the neighborhood of the Fox River. Nearly all the mounds north of this river are conical tumuli and not effigies. Copper relics have been found near New London 40 miles south of this river, and near Embarass 30 miles still farther north. These finds are interesting for they show that the later Indians were in the habit of using and hiding copper implements. The find at New London was that of a nest of copper tools hidden away in a ledge of rocks. The rocks were of lime stone and there were crevices in the ledge which formed pockets; the nest was in one of these pockets. The find at Embarass was different. Here the

nest was deposited in the sand in the midst of some pine barrens. The nest consisted of three knives which seem to have been used and which have quite a modern appearance to them. The find was made by Mr. A. Willmarth, of Embarass, and the relics are still in his possession.

4. As to the connection of the effigy builders with the ancient mines, there is the same uncertainty. There are no effigies on the bank of Lake Superior. The nearest effigy is at Wausau on the Wisconsin River or Trempeleau on the Mississippi River, a distance from the south shore of Lake Superior of at least 60 miles. It would seem from this circumstance that the region about Lake Superior had been from time immemorial occupied in about the same way as since the historic period. The Ottawas and the Chippewas are known to have held this region for a long time and though the Illinois, Kickapoos, Miamis, were permitted to make temporary villages on the banks, and establish trade with the French who at an early time resorted there, yet the region was held by the original people. The Sioux undertook to drive them away but were not able to get possession. For a long time the region was the battle ground between the two great races, the Dakotas and the Algonquins. The Algonquins held it. They told Champlain that there were mines on the banks of the lake and he located mines on his first map but placed them near Green Bay instead of on the bank of Lake Superior, owing to his want of acquaintance with the geography of the region. The discovery of the mines did not occur, however, until 1848. At the time of the discovery wooden bowls for bailing water, wooden shovels for throwing out the debris, wooden levels and props for raising and supporting the mass of copper, and wooden ladders for ascending and descending the pits were found. These would indicate that a civilized race once worked the mines. It is not at all certain but that the French left the relics discovered there. Mr. J. W. Foster speaks of the high antiquity of the mine and says the trenches and pits were filled even with the surrounding surface; that fine washed clay enveloping half decayed leaves and the bones of quadrupeds such as the bear and deer, indicated the slow accumulation of years rather than a deposit resulting from a torrent of water; and that upon the piles of rubbish were found trees growing which differed in no degree in size and character from those growing in the adjacent forest. He mentions the fact, however, that Mr. J. O. Knapp, who first discovered the ancient mines, found a place where the miners had left a portion of the vein stone to prop the hanging wall. He found also an artificial depression 26 feet deep filled with clay and a matted mass of vegetable mould. At a depth of 18 feet he came to a mass of native copper, 10 feet long, 3 feet wide, and nearly 2 feet thick, weighing over 6 tons. It was found to rest on billets of oak, supported by sleepers of the same material. The ancient miners had evidently raised it about 5 feet and

then abandoned the work. The wood was nearly decomposed, but the earth was so firmly packed about it, as to support the mass of copper. Other mines have been discovered. At one place a series of pits, some of which were 14 feet deep, and in one of the pits a wooden bowl. A large number of ancient hammers have been taken out from the mines. Mr. Foster says they would exceed ten cart loads. Charcoal was found lying on the surface of the rock showing that fire had been used. The conclusion of Mr. Foster is that the Mound Builders and the copper mines must be connected. The copper found in the mounds all the way from Wisconsin to the Gulf Coast, and the number of relics, is too great to suppose that they were all derived from the boulder drift. Their wide distribution is evidence of an extensive commerce. This, however, does not prove that the effigy builders were the miners. The connection between the ancient mines and the mounds to the east and to the west is as direct as that between the mines and the effigies of the south. There is a water communication by way of Lake Superior with all the lakes to the east. And the portages from Lake Superior to the rivers which flow to the west, are not so long as to those which flow to the south. On the supposition that the Winnebagoes erected the effigy mounds we should expect few copper relics to be found in them. They were a branch of the Dakotas or Sioux and the Sioux seem to have been excluded from the mines. The Algonquins seem to have had access to the mines but the Dakotas were excluded. It is a noticeable fact that copper relics are much more numerous on the east side of the Mississippi River Algonquin territory as it was, than on the west side in the Dakota country.

As the matter stands at present, we should say that the copper relics of Wisconsin were left by Algonquin tribes, and the majority of them belong to a later period than the effigies. For the same reason, we should ascribe the ancient mining to the Algonquins. We leave, however, the question open for further light:

III. We now come to an important point, the age of the emblematic mound builders. We have spoken of the different periods and of the different races. We are now to ask, to what time shall we ascribe the effigies. In a general way we are ready to make the answer that they are the earliest monuments of the State though we do not undertake to say how early they were. We propose to go over the evidences as to their age and to take up the various points to prove that they were antecedent to other works but subsequent to the period of the extinct animals.

1. The study of the topography shows that the effigies were built after the land had received its general features. The same distribution of forest and prairie; the same or a similar level of the soil; the same or a similar depth to the streams and lakes and the same natural products as existed when the Continent was discovered and the region explored by the white man. There

could have been no great change in the forest for the same trees were growing upon the effigies as are indigenous to the soil. Nor could there have been a very marked change in the fauna for the animals imitated are those which were formerly abundant here. Not a single extinct animal has been found with the exception of the much disputed elephant or mastodon effigy. Not a single modern animal like the horse, cow, or sheep, has been found in effigy. Everything indicates an indigenous forest and an indigenous fauna.

2. The study of village sites brings us to the same conclusion. The history of the State is not old, and yet the date of exploration goes back to as early a period as any part of the West. The opinion is probably well founded that the effigies were built long before the time of this exploration. The description of the villages would indicate this. There were many villages scattered along the water courses, some of which were described by the Jesuit Missionaries and the other explorers. It is very remarkable that these villages were situated in the same localities where effigies have been since discovered. The study of the mounds and effigies has, however, failed to show any connection between the early villages and the effigies. a. The mounds and relics which have been discovered on the village sites are of a different class and show that they were built by a different people. b. The location is different. They are nearer the water on lower ground and are not so massive or so extensive. It is generally supposed that the corn hills and conical tumuli which are found near these various historic points belong to the tribes who were there at the time of the early explorations, but that the effigies preceded them. We have examined the different prehistoric works at Marquette where it is supposed was the village of the Mascoutens which the early explorer and Jesuit Father Marquette visited; and where the Jesuit Allouez established the mission of St. James. We there followed a line of mounds which extended along the ridge which bounds the lake on the south side, for two or three miles, and found many remarkable effigies consisting of massive bears, foxes, and other animals and many long and conical mounds.\*

c. They are remote from the village and probably had no connection with the conical tumuli which were formerly numerous on the village site. d. Another reason for supposing these effigies to have been erected before the time of the exploration, is that the tribes then occupying the land were only temporary fugitives from the Iroquois, so temporary that the mission was soon abandoned. There were also several tribes, and on the supposition that they were effigy builders we would expect a variety of clan emblems. This region, however, was occupied by only one clan or at least presents only one general clan totem, the squirrel, the same totem

\*Secs. 22 and 27, T. 15, R. 12. Another group consisting of a deer and two bears may be found near the bridge on Sec. 10 and 15, T. 15, R. 12. Also on the Sugar Loaf, Sec. 35, T. 16, R. 12.

that prevails at Green Lake. The same is true of other localities. Sauk City was a place where the Sacs and Foxes had a village. Jonathan Carver found them here, in 1780. There are at corn hills here. These can be seen from the depot and cover quite an area of ground. There are groups of effigies in the neighborhood, a large wild goose on the bluff on the east side of the river; a series of long mounds and effigies surrounding a low place or swail as if it were a corral for herding animals or a place for watching wild animals as they grazed. This is a mile and a half west of the village. In the same neighborhood but several miles farther west is the extensive group of effigies which has been described by Dr. Lapham situated on Honey Creek.\*

e. There are many places where history has located Indian villages, and near which effigies have been discovered. The author has examined various early maps in which the Indian villages are laid down and especially Farmer's Map, and has visited the different localities to identify the villages which are known to have existed and the correspondence with these of the groups of effigies. The following are the places where villages and effigies have been examined: on the Rock River, at Lake Koshkonong, at Madison on the Four Lakes, at Fox Lake, at Horicon, at Lake Winnebago, at Manitowoc, and Milwaukee.

f. The situation of the effigies have proven to be quite different from that of the villages. Some of the villages are on one side of the lake and the effigies on another side, and even when on the same side somewhat remote. At Fox Lake it was found that the villages were on the north side but the effigies on the south. At Geneva, the village of Big Foot, was at the west end of the lake, while the effigies were upon the other end. At Madison the village was on the west side of Lake Mendota, and the effigies on the north and south sides. At Lake Winnebago the effigies were upon the east and southeast of the lake but the villages were upon the west and north side and upon the island between the two rivers on the east side. The same is true of other places. There is a correspondence in a general way between the maps of the effigies and the villages, but it is only general. At most of the places, the totems of the later tribes can be distinguished from those of the earlier people. This is another proof of the greater antiquity of the effigies.

3. The study of the tokens confirms the position taken. The successive periods of occupation are shown by the relics and the earth works but in many places the relics are very modern. One of the best places to study history in Archæology is at Lake Koshkonong. Here we have at least five different periods of occupation, all of them marked on the ground. 1st. The period of the effigy builders. 2nd. The period of the mound builders who did not build effigies. 3rd. The period of Indian villages, Winneba-

---

\*See Lapham's *Antiquities of Wis.* Pl. XLIV.

goes and Foxes. 4th. The period of the trader and blacksmith. 5th. The period of the General and his invading army.

It is interesting to go over the ground and trace out the tokens of the different periods. Some of these have disappeared but the early inhabitants have them in mind and furnish information about them. The map of this lake should furnish not only the route of the railroad and the lines of the surveys, sectional lines, but should furnish the route which General Atkinson took while following Black Hawk. This should be on the east side not very remote from the lake. In addition we should locate the Winnebago village which was on this side and the place of Black Hawk's encampment on Black Hawk's Island. We should locate also the Winnebago village and the Fox village on the west side. One on the north side on Mr. Rufus Bingham's land; the other south at Taylor's Point. We should locate the trading post with its cabin and old chimney and cellar which Mr. Bingham describes as in ruins when he first took up the land in 1839. We should also locate the trails; one running from this old cabin, across a group of effigies near by, toward Madison and the Four Lakes. This would be the historic map. For the prehistoric, we should locate the cornhills which cover about 40 acres of low ground near the old cabin including a group of burial mounds on the bank of a lake in front of the farm house. We should also embrace the caches and long mounds situated near the cornhills and above all should take in the large group of very ancient effigies situated on a hill back of the cornhills, north and west of the trader's cabin. There are four or five classes of remains on this one farm. The

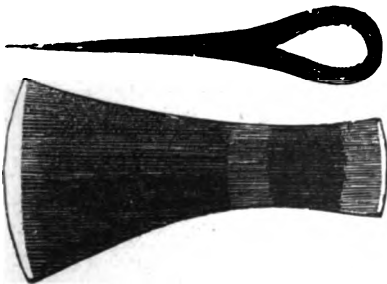


Fig. 156.—IRON AXES AT KOSHKONONG.

cabin, the corn hills, the trail, the caches, the burial mounds, the effigies all indicate different periods of occupation and yet all are situated near a modern Indian village. At Lee's Point, a mile further east, a large quantity of old brass and copper, fragments of kettles with iron rivets; old iron axes and hoes and other modern relics have been found. Mr. Lee has in his possession 27 axes and hoes. [See Fig. 156.] The hoes are made like the axes but with the sockets turned around so as to be at right angles. All of them are very rude and of American make.

There is a group of effigies on the west side of the lake, three miles south and west of Mr. Bingham's farm. [Fig. 157.] Among the effigies are two tortoises, two panthers, a battle ax, several long mounds and about 100 conical mounds. This group



is on high ground and overlooks the lake in all directions. A group of effigies and long mounds may be seen on a ridge three miles north from Mr. Bingham's consisting of a line of long mounds and effigies. It is situated on a slightly spot overlooking the lake though distant from it at least two miles. The

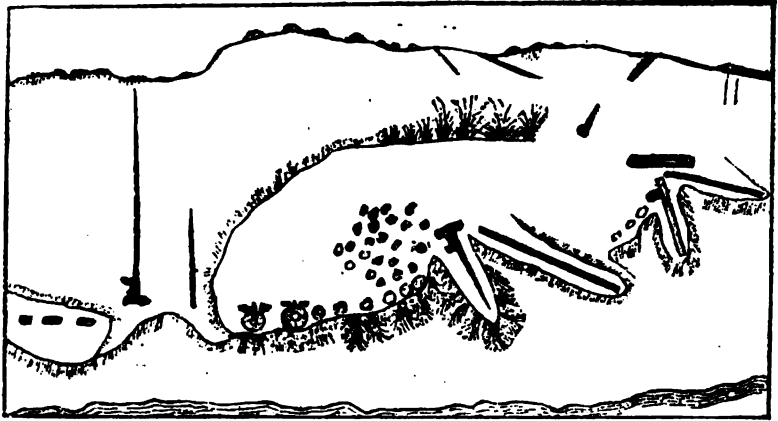


Fig. 157.—EFFIGIES AT LAKE KOSHKONONG.

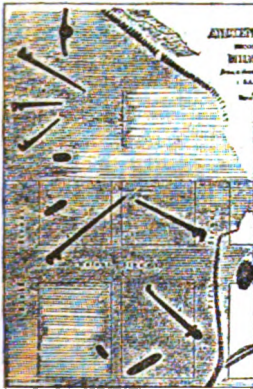
region around this lake furnishes conclusive proof that the effigies were older than the Indian villages and were not built by the tribes who erected the tumuli and who dwelt here at the time that history began.

4. Another evidence of antiquity of the effigies is found in their weather-worn appearance. This is not always apparent, for there are effigies which are well preserved. These are however, generally found in the forests and in places where there would be very little wear from the elements. There is a difference in the effigies, some of them seem to be older than others, even conveying the impression at times that there were different periods among the effigy builders. Still the wear of the elements upon the effigies must have been much greater than upon the conical mounds, and more upon them than upon the corn hills, making the effigies appear as the oldest of all, showing that three different periods were occupied by these three different classes of works. A good illustration of this can be found at Mud Lake, ten miles north of Aztalan. The writer, in company with Mr. Terry of Lake Mills at one time visited this place. It is remote from settlements and is said to have been a favorite place with the Indians long after the rest of the country was deserted by them. There are two groups of mounds here, one on the south side of the Crawfish River composed of small conical mounds with a large number of corn hills surrounding them, the other on the north side of the river composed of large flat mounds surrounding an enclosure and a few effigies in the woods

close by associated with them. The appearance of the conical mounds and corn hills indicated that they were very recent. They were very fresh, having no signs of being worn, but that of the other group was as if very old.

Some of the conical mounds were surrounded by rings looking as if they had been formed by persons dancing around the mound and beating down the ground. This contrast between the appearance of the effigies and the corn hills, is much greater than that between the effigies and the garden beds. There is a series of garden beds near Sextonville in Richland Co., which has nearly disappeared. They are situated on a side hill which slopes to the west, and are nearly 300 ft. long. Within a mile of these, the writer discovered a large group of long mounds and conical mounds arranged as if there had been a battle field and a burying place for the dead after battle. Not far from this so-called battle-field are a number of effigies. The effigies and conical mounds in this case seem to be much better preserved than the garden beds. The writer has also discovered near Mayville a plat of garden beds, and surrounding the plat, an immense effigy of a serpent, the serpent being made from a natural ridge. Both presented evidences of age.

5. Another proof consists in the fact that the corn hills and garden beds, and in some cases the conical tumuli are placed on the top of the effigies showing that the later people had no regard for the sacred character of the totems which the earlier races had erected. Dr. Lapham has referred to this and



given several instances where it occurs. There is force in what he says. The effigies at Milwaukee are illustrations of the point. The effigies here are mainly of two kinds, the coon and panther, and were probably built as clan emblems. They were situated on all the high points and at the edges of the bluffs in various parts of the city. There were groups in the first ward near the corner of Johnson and Main streets; [See Fig. 158.] in the third ward between the fifth and sixth, at the

Fig. 158—EFFIGIES AT MILWAUKEE, junction of Walnut street; in the fifth ward; [Compare also with Figs. 101, 134, 135.] In the eleventh ward near Bayview; on the Kinnikinnick and near Forest Home Cemetery. There were also intaglio effigies near the cemetery, and five excavated effigies, intaglio effigies as they are called, in one group at Indian Prairie, five miles north of the city. Corn fields and garden beds were found in two or three localities, but in each place extended over the effigies; in one case they had

nearly obliterated the animal shape. It would seem from this that the effigy builders had previously occupied the region and had built the clan emblems on the hill top to show their right of possession, and had placed the prey gods in the shape of intaglio effigies as defences for their own fields, but that other races had come in after them and had ruthlessly covered these effigies with their corn hills. Dr. Lapham refers to one case where the corn hills were built over the effigies and where a recent grave of an Indian had been placed on the summit of an effigy. We have discovered effigies with conical mounds built upon them; the mound evidently having been placed there since the effigy was erected. One such case was found near Belmont, west of Platteville. There are also many other cases of the same kind in the state.

6. The last evidence of the antiquity of the effigy builders is found in the fact that no effigy of modern animals has been found in them. They are in the shape of animals which formerly existed here; bears, buffalo, squirrels, foxes, beavers, panthers, turtles, being the most common. No extinct animal has been found represented by the effigies. The so-called elephant effigy would be regarded by some as an exception to this, and evidence has been presented by it to prove the effigy builders to be contemporaneous with the mastodon, but there is so much uncertainty in relation to this mound that we have to reject it. We should say that the effigy builders were subsequent to the mastodon but preceded the advent of the white man. The animals which they represent are such as were common among the forests of the West; no modern animal is represented by them. In this respect they differ from the pipes. There are pipes which have modern animals upon them and give evidences of having been made after the advent of the white men. The moulded earthworks of Wisconsin resemble the pipes in that they have so many animal figures and represent the animals in many different attitudes, but they differ from the pipes in that they contain no foreign animal so far as we can discover and imitate nothing that was introduced by the white man. We place them all before the time of the discovery.

## THE ORPHAN MYTH.

## THE DHEGIHA LANGUAGE. III.

1. The adventure of the *Orphan as a Rabbit*. In this shape, the Orphan went to a village of his foes. The people pretended to be very glad to see him, and conducted him to the chiefs, (probably the assembly lodge.) Then they surrounded him and asked him to dance. They made a song, in which they tried to ridicule him. At the end of the dance, the Orphan struck four of the chiefs, fracturing their skulls. The enraged villagers were thrown into confusion by the sudden attack, but they endeavored to catch the murderer. He escaped, however, owing to his small size, by passing between two of the people. He fled homeward, pursued by the angry multitude. Reaching home he asked his grandmother for a piece of metal. She gave him a piece of iron which belonged to her hide-scraper. By means of his magic art he made this increase in size as he threw it, and it covered the lodge just as the people reached it. Thus were the villagers disappointed in getting him into their power.

2 and 3. *The Orphan and the Water Monster*.—There are two versions of this myth. Mrs. La Flèche said that parts of it were of French origin: this includes the gun, paper, powder, shot, sword, table, and the white man's food for the marriage feast. But she agreed with the Ponkas and several Omahas in considering the rest of the myth as of native origin. The Orphan was a poor lad, who found a mysterious writing, then a weapon which killed all kinds of game. By and by, he exchanged this weapon for two wonderful dogs and a magic sword. One version names the dogs, Walks-along-the-stream and Breaks-iron-by-biting; but an Omaha and the Ponkas called the first dog, Shivers-stones-by-biting. By the aid of his dogs and sword, the Orphan rescued a chief's daughter, who had been exposed on the lake shore to the attacks of a water monster. The first day, he cut off one head, the second day, two; the third day, three; and the fourth day, one. (Four and seven are the mystic numbers.) The hero kept the seven tongues of the monster, but left the heads on the shore. A black man found the heads, and so claimed that he had been the rescuer of the girl. The chief promised him his daughter in marriage, and preparations were made for that event. Just in time, however, the Orphan appeared and exposed the deceit of the black man, who was burnt alive. Then the Orphan married the chief's daughter.

4. There are three versions of the myth of the *Orphan and the Buffalo-woman*.—The Orphan, who had lost both parents, dwelt

with his sister and her husband. They did not treat him kindly, and at last he was almost starved. One day, when he was left alone in the lodge, a beautiful woman appeared suddenly, and in spite of his remonstrances she cut off the best slices of the meat which was hanging up, and gave them him to eat. This she did four times. To his great surprise, the meat returned to its original size through her magic power, as she was a Buffalo-woman. After her departure, the Orphan followed her trail, but did not overtake her till late in the day. She gave him a tiny bowl (about two inches in diameter) full of pounded buffalo meat, all of which he could not devour, as it never diminished in quantity. When he desisted, she took the bowl, and devoured all the meat at one swallow. Night came, and the man slept soundly. On awaking he found himself alone on the prairie. He followed the woman's trail as before, and overtook her when it was near sunset. Similar occurrences are recorded of the second, third, and fourth days. The myth then tells how Ictinike stole the son of this Buffalo-woman from her, and how the Buffalo-calf escaped and found his mother. When the Orphan came in sight on the bluff, his wife went to meet him, and in a secret interview she told him how to distinguish her from another Buffalo-woman who closely resembled her. In like manner the Orphan was enabled to recognize his son, the Buffalo-calf. Had he failed to identify them, the Orphan would have been killed by the Buffalo people.

5. The second version of this myth gives the address which the *Orphan made to the Birds* when he asked them to punish his sister and her husband by devouring the corn, etc. The Buffalo-woman gave birth to two calves, instead of one, as in the other versions. After the Orphan had reached the Buffalo village, he, had to tell which of four white cows was his wife. The Buffaloes fled from the Orphan, rising by means of their wings to the upper world. But the Orphan overtook them. Then they crossed the Great Water up there, but even then he caught up with them. After recrossing it, they returned to this world.

6. The third version tells what obstacles the Orphan encountered in pursuing his wife. The first day he crossed a great river at one stride, after calling on his wife's name and closing his eyes. The next day he crossed a canon that was almost bottomless. The third day he crossed a tract of land covered with sharp thorns. The fourth day he stepped from this world to the upper one. Then the contest was abandoned, and he took his wife and child to his sister's lodge. He found that the cruel pair were very poor, and nearly dead from starvation, as the birds had eaten the corn, and the man had not been able to kill the animals. Henceforth there was a change for the better: the game returned, and the sister and husband were kind to the Orphan and his family.

7. The man who had two wives, a Corn-woman and a Buffalo-woman, was one day abandoned by them. That part of the myth telling of the subsequent adventures of the Corn-woman was not gained. The man pursued the Buffalo-woman, and came in sight of a tent in which she and her son were staying. The woman gave her husband a small quantity of dried buffalo meat in a bowl, and a tiny bowl in which the water barely spread over the bottom. Yet he was not able to empty the bowl after much effort. The woman soon swallowed their contents. The next morning, the husband found that the tent and its other occupants had disappeared. He overtook them again towards night, and before he went to sleep, he took the precaution to tie his wife's feet to one of his own. In spite of this she managed to escape without arousing him. The next day he reached a stream which he knew they would cross. He heard them moving in the water. He took a plume from his hair, and blew it across the stream. Lo, he himself became that plume, and reached the other shore in advance of his wife and child!

The Buffalo village was soon reached. Then there were several contests between the man and his wife's mother, with the understanding that if she won, he must lose his life. He went into the sweat-lodge with the old Buffalo-woman, and came out shivering, when she fainted from the heat! He distinguished his wife from all her sisters, and his sons from all the Buffalo-calves. He ran a race with his mother-in-law, and though he fell asleep at a distance, she returned to the village before him, he awoke just in time to blow his plume and alight in his lodge as the old woman called for her spear to kill him! He contended with her in swinging, and in spite of her trick, he was not killed by the fall from his swing. The myth, as gained, ends with the man's killing his wife's mother.

J. OWEN DORSEY.

Bureau of Ethnology, Washington, D. C. Jan. 14, 1887.

## TRADITIONS AND HISTORY OF THE PUGET SOUND

*Washington  
Ethnology*

(INDIANS)  
(gnd. 1880)

*Eds. M.*

*Their Own Account of their Origin and History.*—They believe that all except the Chemakums, were created where they now are, and also that nearly all other tribes and nations were created where they now live. They have no reliable knowledge of their own history earlier than the recollections of the oldest Indian. Even in obtaining their names for various articles, I have often found that persons of twenty to twenty-five years, do not know their names for stone arrow-heads, axes, chisels, anchors, rain stones, and the like, which went out of use soon after the com-

ing of the whites. This shows how quickly the past is forgotten by them.

I give the following stories, in which I presume there are more less grains of truth, most of which were written for me by a Twana school boy, as they were told him by his father, and which are about all I have learned from them about their history.

*The Quinaielt and Quilecne Indians.*—"While the Quilecne Indians were at peace in their habitations, a girl went out and looked into a house and saw many of their enemies (in her mind) getting ready to go into every house of the Quilecnes. She returned and told her master's family, but they would not believe her. The same day a boy went to get some water; when he looked into the water he saw some shadows, which were smiling, and these were the Quinaielt Indians. So he went home in haste to tell his parents, but they would not believe him. The girl took one of her master's sons and hid in the woods. Hence these Indians were not afraid, and so were all killed except the girl, the little boy, and one man, for the Quinaielt Indians went into every house and slew the Quilecnes. One man took his small babe and ran away. His enemies pursued him, and when he saw that they were about to overtake him, he laid down his child and began to swim across the bay. The Quinaielt Indians knew that they could not swim after the man, so they took his child and cut it in pieces. When the girl came back, she found her master dead, because he would not believe her."

*The Victoria Indians and Two Families.*—"Two families were traveling together and at night they lodged. While they were there some one shot from the woods, and when they looked they saw some Indians. One family went off as fast as it could, but the other had left their child near a log. The Victoria Indians took him, but his father got ready and fired at them, and they restored the child. My father thought that if they should shoot at their enemies, they would think them brave and be afraid. The child that was taken captive is still living, and the daughter of the brave is also alive."

*The Quinaielt Indians Again.*—"After the battle the Quilecnes went out to search for their enemies, whom at last they found. Then they made a great shelf over their own beds. Their enemies came and were placed under the shelf, and one of them took a wife of the daughters of the Quilecnes. After a long time they laid themselves down on their beds, and the Quilecnes cut the ropes which held up the shelf. It fell down on the heads of the Quinaielt Indians and none of them escaped.

Once the Quilecnes bored some holes in the bottom of their canoes, as their enemies came to see them. As they went home the Quilecnes started to take them across the bay. When they were in the middle of the bay, they took out the sticks, and the

water came into the canoes and filled them. The Quinaiaelt Indians were drowned, but the Quilcenes were not drowned, because their neighbors went to them and helped them. So the Quilcenes prevailed over their enemies, and there was peace."

*Story of Another Family.*—"There was a man with his wife and children. One woman who was very fair, was walking with a babe and some boys and girls. This was the daughter of a sick man, but when she came home, she found some other Indians slaying the family, and her father was killed. These took hold of her; one wanted her, another wanted her, and all wanted her, and so they killed her, and none had her. The man's wife dug deep in the ground, put one of her daughters there and covered her over. She did also the same for herself, and another person climbed a tree, and none saw her; so three were left alive. The man was sick, and yet they showed him no mercy."

*A Fight with Grizzly Bear or Panther.*—"A long time ago a man came to the Canal to marry a wife. He found one and gave some things to her father. The woman loved the man, but her father did not like his son-in-law, but threw the things away, which the man gave him; hence the man went home. After a while the woman and some others went to gather berries. My mother's mother was among them. The woman had a companion; and the two went away from their comrades, where they saw the bear, but they did not fear it; they simply talked about it and made fun. The bear went off, but after a time they saw it again, when they talked just as at first. The bear went around the woman who had wished to marry the man; and suddenly jumped at her. The other woman went to help her, but soon received some wounds, so that she left, and went to tell her other comrades, while this woman kept fighting with the bear. Poor woman. She called aloud to her companions to help her, but they ran home to tell the news. She was soon killed; but her friends told her parents, and that night very many people gathered together with spears, arrows and knives to fight the bear. When they reached the place they told the woman's parents to stand on a fallen tree, so that they would be safe. Then they surrounded the bear and had a great fight. They shot the bear, and wounded her on each side, but after awhile she ran away, and they ran after her. But after a time they had no more arrows or spears, with the exception of two or three young men, who still followed her. When they reached a muddy place, the bear stood on her hind legs and danced. The young men became frightened and ran back. When they looked at the dead woman they found very many wounds in her."

Thus far I have given the stories just as they were written for me by the school boy, A. P. Peterson. The last one I presume is true in the main, as I have heard it from several parties, although I think the animal must have been a panther rather than



a bear, as the grizzly bear does not live near here, while panthers are the most ferocious animal in the region, and the Indians fear them.

The Twanas relate that a long time ago they were camped in a scattered condition on Hood's Canal, nearly ten miles south of Seabeck. The Clallams came and killed those furthest north, and took four or five girls captive. Those further south were afraid, and some wished to flee, but others said no. The Clallams however did not come to them, but returned.

Again I add some war stories as written for me by A. P. Peterson. "For some cause the Quilcenes and Skokomish Indians got mad with each other, and got ready for battle. I do not know all about it, but my father tells a part of it. The Quilcenes were in a canoe going home with my mother, whom they took from my father, when my father took his gun, and would have killed all of them, if some one had not taken the gun away from where it was pointing, and it shot off another way. The Kolsids then went home, and they became friends again." Thus what was called war ended without any bloodshed.

The following traditions have also been related to me, which may have a few grains of truth in them for a foundation. A long time ago a large number of Indians came up Hood's Canal, and landed near the Eneti, on the beach, west of the mouth of the Skokomish river, instead of going up the river, as they were not acquainted with the country. The Twanas were camped on the Skokomish river, about four miles above its mouth. Their enemies intended to surprise them, and so conquer them, but owing to their ignorance of the country, they proceeded to march overland to where the Twanas were camped, and consequently fell into a great swamp, which still exists and is considered impassable. Here they stuck and could not get out, until at last they were stung to death by multitudes of mosquitoes. Tradition also says that long afterwards, some of the Twanas visited the place, and saw the bones, bows, arrows, and spear-heads of their enemies, which still remained there.

The Twanas also say that many years ago, perhaps eighty or a hundred, nearly all the Indians on the Sound leagued together to fight the Indians of British Columbia. This league included the Twanas, Squaksons, Chemakeums, Clallams, Snohomish, Puyallup, Nisqually, and Skagit Indians, who went in hundreds of canoes, and with thousands of warriors. They intended to surprise their enemies. When near Victoria they however met a large number of the Northern Indians in canoes, but they were many less in number than the Sound Indians. The Sound Indians urged the others to fight, but they did not wish to do so, and only consented after a large amount of urging. The battle continued all day, when the Sound Indians were defeated with great slaughter, the British Columbia Indians being by far the

best fighters. Only a few of the defeated Indians ever lived to return; in some cases only three or four of a tribe. One or two are reported as having escaped by swimming and having swam for a long time, they reached a floating tree, upon which they remained for nearly a month, without clothes or food, and yet they did not perish. At last they drifted to land on the southern side of the Straits, and so returned home.

*History by the Whites.*—Dr. Gibbs in Vol. I Contributions to North American Ethnology, has probably given the most correct history extant of the early visits of the whites to this region, of which I make a short synopsis. The first visit of which we have any knowledge was in 1789 by Captain Kendrick of the Washington, or in 1790 by Lieutenant Quimper, Spanish, in the Princess Royal. They came as far as Dungeness. The Indians thought it was Dokibatl, the Great Deity of the Puget Sound Indians, as they knew nothing of the white men. Accordingly when they visited the ship they painted their faces and prepared themselves as for a tamahnous. Capt. Kendrick went as far as the entrance to Admiralty Inlet. Two other vessels came a year or a year and a half later, but they did not go above Port Discovery. In 1792 Vancouver came, who gives the first account extant of these Indians. He visited all of the Indians on the Sound, and gave names to the various places, most of which remain until the present time. The people did not seem surprised at his expedition. With one exception, there was no hostile demonstration, and owing to precaution, all trouble in this case was avoided. After these early explorers, in the early part of the present century, the Hudson's Bay Company came, and the greater part of the intercourse of these Indians with the whites was with that Company, until about 1850. They had one trading post of the Indians herein described, on the land, at Fort Nisqually, near the southeast part of the Sound, and one a little north of Washington Territory, at Victoria, in British Columbia.

During the past thirty-five years the Americans have supplanted the British traders. They have erected saw mills, built stores and towns, and cultivated farms in the midst of these Indians. Our loggers have entered their woods, and our fishermen their waters. Our ships and steamers have frequented their shores. They have broken up their seclusion, and have introduced the habits, virtues, and vices of the white man.

Vancouver gave the name to Hood's Canal, or Hood's Channel, as he called it, after Lord Hood. There is also a tradition among the Twanas Clallams, (and I see no reason to doubt its truth, for I have heard it likewise from the oldest white inhabitants), that long ago,—how long is not known,—a person named Captain Hood, excited the enmity of a Clallam Indian, who followed him closely, yet secretly, in order to take his life. Hood seems to have been aware of this intent, and one night when he

encamped on Hood's spit, six miles above Seabeck, stationed two men to guard him. They, however, all fell asleep, whereupon the Indian stole up, killed him, and fled to the other side of the Canal. A bare place, which the Indian is said to have ascended in order to look out for possible pursuers, has been pointed out to me by one of the older Indians. When I asked this Indian why that Indian killed Captain Hood he replied, "Because he was a fool." The Clallams call the name of the place where Hood was killed, Iliwi-a-né-ta, a corruption they say of the words, white man, and the name of the murderer was Kwainaks. It is a common belief among the whites, that both the Canal and Spit were named because of this event, but after some investigation, and a little newspaper discussion, I think that the Canal was named, as Vancouver's voyages say after his officer of that name, but as he makes no mention of the death of that person, probably at a later day, another person by that name was murdered as just related, on account of which the spit before mentioned was named Hood's Spit. Vancouver also named Puget Sound from one of his officers Lieut. Puget.

*Treaties.*—December 26, 1854, a treaty was made at Medicine Creek by Gov. I. I. Stevens, who represented the United States, and a few associates, with the Puyallup, Nisqually, and Squakson Indians, together with a few small, associate tribes. By the terms of this, three reservations were set apart for the use of these Indians, the Puyallup reservation, at the mouth of the Puyallup River, the Nisqually reservation, about six miles above the mouth of the Nisqually River, and the Squakson reservation, consisting of the Squakson Island.

The Puyallup reservation now consists of 18,062 acres, and is the most valuable reservation on Puget Sound, as it consists mainly of rich bottom land, adjoining Tacoma, the terminus of the North Pacific Railroad. In 1886 these lands were patented to the Indians in severalty. The school for the benefit of the Indians belonging to this treaty is situated here, their physician and other employees reside here, and it is now the headquarters for the agent of all the Upper Sound Indians.

The Nisqually reservation consists of 4,717 acres, which in 1884 were patented to these Indians in severalty.

The Squakson reservation consists of 1,494 acres, all of which is timbered land, not far above the level of the sea, and a large share of it may be called second class land. In 1874 these lands were patented to these Indians in severalty.

January 22, 1855, at Point Elliot, a treaty was made with the Duwamish, Etakmur, Samish, Skagit, Lummi, Snohomish, Sukwamish, Swinomish and Port Madison Indians. By it, four reservations were set a part for their use. The Tulalip or Snohomish reservation comprises 22,490 acres. Here is the school, the residence of the agent and most of the other employees. In 1885

and 1886 these Indians received patents for their lands—most of which is second quality land.

The Swinomish reservation consists of 7,170 acres. About five hundred acres of this is first quality, tide marsh land. The rest is gravelly and upland, and very poor.

The Lummi reservation lies at the mouth of the Nooksack River, not far from the northern boundary of Washington Territory, and comprises 12,312 acres—for which the Indians received patents in 1884. More than half of this land is very valuable—first quality.

The Port Madison reservation lies on the opposite side of the bay from the town of Port Madison. There are 7,284 acres in it. It is mostly land of a poor quality.

The treaty of Point No Point was made January 26, 1855, with the three tribes of Chemakums, Clallams, and Twanas. By it, but one reservation was set a part for the Indians,—the Skokomish consisting of 4,987 acres—three fifths of which is number one bottom land, and the rest is hilly and gravelly.

By orders of the President the Muckleshoot reservation was set apart for the benefit of the Muckleshoot Indians, January 20, 1857, and April 9, 1874. This reservation consists of 3,367 acres, on White River, a branch of the Duwamish, and attached to the Tulalip Agency. The land is good bottom land.

An attempt was made by Gov. Stevens in February, 1855, to negotiate a treaty with several tribes of Indians on and adjoining the Chehalis River, consisting of the Cowlitz, Upper Chehalis, Satsop, Lower Chehalis, Chenooks, Quinaielts, and Queets, but it was a failure, and consequently no reservation was given them by treaty. By an order from the Secretary of the Interior dated July 8, 1864, the Chehalis reservation was set apart for the benefit of the Upper Chehalis Indians. This consists of 4,225 acres, is situated on the Chehalis River, at the mouth of Black River and is attached to the Nisqually Agency. About one fourth of this reservation is number one bottom land—most of the rest is gravelly upland, and not good for much except pasture.

*Indian War.*—In 1855 and 1856, soon after the treaties just mentioned were made, but before they were ratified, the Yakama war occurred, which was the most widespread Indian war that ever devastated the North Pacific coast. It extended from Southern Oregon, about Rogue river to the Yakamas on the north, and from Puget Sound on the west to the Burnt river and the Grand Ronde Valley in Eastern Oregon. A part of the Indians on Puget Sound were engaged in it, mainly those living around Olympia, Steilacoom, Tacoma and Seattle, namely the Squaksons, Nisquallies, Puyallups and Duwamish Indians. The other tribes on the Sound did not engage in the war, and people lived among the Twanas in safety during the whole of the time. The country around Tacoma and Seattle was devastated, to what amount I

cannot learn, but in 1886, bills for damages by the people of King County alone—around Seattle—remained unpaid at Washington to the amount \$50,666.81. Volunteers were raised and the Indians subdued. Before the war closed, a number of Northern Indians came from British Columbia to engage in it. They committed depredations near Steilacoom, and then started to return, but were overtaken by a United States war vessel under Commander S. Swartout at Port Gamble. The Indians numbered 117 fighting men, and after several offers of peace if they would leave the Sound, which they rejected, they were attacked and completely conquered, with twenty-seven killed. This was the closing act of the drama.

The treaty with the Nisqually and Puyallup Indians was ratified soon after it was made, but the other two treaties were not ratified for four years. Soon after the ratification of each, the United States began to fulfill her part, and consequently sent agents, employees, which usually consisted of a farmer, physician, blacksmith, carpenter, and school-teachers, together with annuity goods to the Indians. By limitation, these treaties expired after twenty years, and the Indians could demand nothing further of the Government; still while a number of the employees were discharged, an agent, physician and school employees have been retained to the present time. Most of the time, until 1881 there were three agents, each one of whom had charge of the Indians, represented by one treaty. In 1881 they were all consolidated under one agent, with head quarters at the Snohomish reservation, though the Indians were allowed to reside at their several homes. The next year this agency was divided into two, one agent to have charge of the Snohomish, Swinomish, Lummi, Port Madison and Muckleshoot Reservations, with head-quarters at the first named, and the other with head-quarters at Puyallup, to have charge of the Nisqually, Puyallup, Squakson, Chehalis, and Skokomish reservations. The principal schools, boarding and industrial, have been at the Snohomish, Puyallup, Skokomish and Chehalis reservations, with a day school at Dungeness among the Clallams. Religiously the Indians on the Snohomish, Swinomish, Lummi, Port Madison and Muckleshoot reservations have been under the instructions of the Catholics for about thirty years, the Puyallups, Nisqually and Upper Chehalis Indians have been chiefly under the teachings of the Presbyterians for fifteen or twenty years, with some from the Catholics, and the Clallams, Squaksons and Twanas, chiefly under the Congregationalists for the past fifteen years.

## Correspondence.

---

### QUARTZ-WORKERS OF LITTLE FALLS.

*Editor Am. Antiquarian:*

Much has been written in regard to the ancient quartz-workers of Little Falls, Minnesota, or rather regarding their handiwork. Some of the authorities make it appear as if hundreds of quartz implements were found at this point, and that they are pre-glacial.

The present writer has visited that vicinity three times since 1881, and spent many hours during each visit searching for evidence concerning the chips, implements, etc. found there. The implements thus obtained are as follows, viz: one small war arrow-head and two notched-base arrow-heads, all made of quartz, seven chert arrow-heads, two stone ornaments, and a very small grooved stone axe. As far as is certainly known, only one other quartz implement (an arrow-head) has been found in that neighborhood. On the west side of the river a few nut-holders, or so-called anvils, have been discovered.

The sandy plain upon which Little Falls is situated is about one mile in width, and from 30 to 40 feet in height above the river. Directly opposite there is a narrow terrace, which is much lower. In the river at the falls the quartz is found between the strata of slate. The east terrace overlooking the falls is some 28 feet in height. Directly abreast of the falls there is a point which is several feet below the general level and not far removed from the bed-rock. Here are exposed quartz chips, slate, disintegrated quartz, and gravel, all inter-mixed. The river has at some time in the past swept the sand off this point and left the mixture which now presents itself. At the same level, 200 feet further up the river, there is an exposure of gravel and boulders, but in the undisturbed stratum there is not a piece of quartz to be found. Beneath the latter and resting upon the bed-rock (quartz and slate) is a stratum of drift-boulders with broken masses of slate and quartz, of various sizes and shapes. Some of these masses are water-worn, while the major portion of them, seemingly, were merely broken from the bed-rock and not carried very far. Above the former there is a stratum of fine sand and small water-worn gravel, with little or no loam above. Upon and within this stratum many quartz chips are found, but they do not show the least evidence of attrition. At the mill in the upper part of town, where there is a perpendicular cut through this layer of sand, the quartz chips extend downwards to the depth of from three to five feet. These have undoubtedly worked down from the surface in the course of time. Wherever the surface is

undisturbed within two or three hundred yards east of the river, many of these chips may be found just beneath, and, in some instances, quantities of them. Chert chips and broken pottery are also found.

Above the mill there are several mounds and embankments of the period of the Mound Builders. Half way from the mill to the main rapids there were formerly several circular depressions, which were made by modern Indians, and are similar to the dirt-lodges of Sitting Goose, which were just north of Redfield, Dakota. A tepee or tent would be stretched over each circle.

Opposite to and above the falls, on the west side, the evidences of the quartz-workers are much more numerous. The top soil is black sandy loam but there are occasional spots that are almost wholly sand. Just beneath the surface there are large quantities of quartz chips and burned stones. Broken pottery and chert chips are more common than on the east side, and may be found in nearly any wash or on the ploughed land. Just beneath the surface at several different points along the river there are also fire-places. They are only brought to light by the caving away of the bank, and for the most part consist of a slight hollow which is reddened by fire and contains ashes, charcoal, and stones that have been discolored and broken by the action of heat. Some of these fire-places are two feet beneath the surface.

Above and below Little Falls there are other terraces that are still lower and are formed almost entirely by a mixture of disintegrated quartz, slate, water-worn boulders, and gravel, covered with more or less loam or sand. At Pike's Rapids, a short distance below, the topography is pretty much the same as at Little Falls. The east bank is high while the one on the west side is low and the terrace or plain not so extensive. From Little Falls to the foot of these rapids there is scarcely a wash or piece of ploughed land that does not reveal the existence of quartz chips. There are also two points within this space where more or less pottery, chert arrow-heads, and stone implements have been ploughed up.

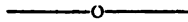
That this quartz (which is white and opaque) has been used in making implements there can be no reasonable doubt. The men who worked it may have been some of the Indians who formerly occupied this region. It is more probable however that they were the Mound Builders who preceded the Indians and whose earth-works are quite numerous.

It would have been an impossibility for the floating ice, or the waters of the river, to have deposited the chips and fragments of quartz over this plain, for the slate containing this quartz, wherever exposed, is from 20 to 40 feet below the flood-plain. In a Minnesota Geological Report it is stated that—"During the high stage of water that formed this terrace, the plain itself was intact from side to side, the present river channel which is cut down to the slate and the quartz veins, not having been excavated." The water-washed sand covering this region was probably deposited after the last glacial epoch, when the river extended from bluff to bluff.

The "chunks" and chips of quartz are not confined to the vicinity of Little Falls and Pike's Rapids, but extend as far south as St. Paul, and are found in washes along the river above Little Falls as far north as Brainerd. Also to the east of the latter point at Red Cedar Lake and Aitkin, and west of it along the Crow Wing River to the mouth of the Partridge River. Arrow-heads and fragments of this material have in several instances been found in the mounds, and are also frequently picked up on the natural surface in various parts of Minnesota, Dakota, and Manitoba.

T. H. LEWIS.

St. Paul, Minn.



✓

### SOME AZTEC QUESTIONS.

*Editor Am. Antiquarian:*

In the last number of the *ANTIQUARIAN* Dr. Brinton in a learned and valuable article on *The Graphic System of the Mayas* has exhibited a candor and freedom from prejudice worthy of all commendation. I refer especially to his comments upon certain results arrived at by Mrs. Nuttall in her studies of the Mexican system of writing, as reported to the American Association for the Advancement of Science, at their late meeting in Buffalo, and published in *Science*, Oct. 29, 1886. To particularize only one of her conclusions, "the existence of communal property and of an equal division of general contributions into certain portions," we find in this a substantial agreement with Mr. Bandelier's opinion that "the social organization and mode of government of the ancient Mexicans was a military democracy, originally based upon communism in living." [See *The social Organization and Mode of Government of the ancient Mexicans*, in the twelfth annual report of the Peabody Museum, p. 699.] As Dr. Brinton well remarks this "deals a severe blow at prevailing theories regarding the government of the Aztec tribes;" although we cannot call, as he does, "entirely new" the light it sheds "on ancient Mexican history and social life."

In a subsequent paper read before the American Philosophical Society upon *Ikonometric Writing* Dr. Brinton does not "hesitate to say that Mrs. Nuttall's results will be found to come up to the highest standard of scientific requirement." This last essay still further develops in a most interesting manner the characteristics of what he has so conveniently designated as "ikonometric writing," and adds an original contribution to the study of the Mexican system in "the phonetic value which it assigns to colors." This he carefully distinguishes from the use of color in the ancient Egyptian writing, which never had a *phonetic* value, but was only employed in a general determinative way from some supposed similarity of hue. We think, however, that Dr. Brinton is wrong in supposing that the Egyptians used the color *green* to indicate bronze. Wilkinson says that bronze was indicated by *red*; and Lepsius states that the paintings of the Old Empire always represent weapons as

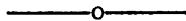


*red or bright brown.* Dr. Brinton shows conclusively that the colors yellow, blue and red were *used* phonetically by the ancient Mexicans.

Let me add a word *upon* a subject connected with Aztec mythology, which has *been* lately treated in the ANTIQUARIAN. In the number for May, 1885, (Vol. VII, p. 151), Mr. Amos W. Butler, in an article upon one of the great monoliths at San Juan Teotihuacan, concludes by saying "we have no way of knowing who the figure upon this stone was intended to represent. After a great deal of examination of remains I have found but one figure in which there is discernible any resemblance. The image to which I refer is the so-called figure of Quetzalcoatl, from Cholula. These two images are of a type, which, to say the least, is peculiar. Are they of the same epoch? Do they represent the great "God of the Air" of the ancient Toltecs?" In a study of the same monument by Mr. Wm. H. Holmes, in the *American Journal of Archaeology*, for Oct. 1885, (Vol. I., p. 371), no attempt is made at any identification of the sculptured figure, but it is left for future research. In so doing he has acted prudently, for certainly it bears no resemblance to the celebrated divinity worshipped at Cholula. Duran tells us that "this idol was of wood and had the entire body of a man and the face of a bird with a red bill, on which grew a crest with warts like a Peruvian duck. The bill also had a row of teeth and the tongue hanging out. From the beak to the middle of the face there was yellow paint and besides a black band from the eyes down around the bill." A glance at Mr. Butler's illustration will show that there is no similarity between the two figures. The whole subject of that most perplexing of deities, Quetzalcohuatl, has been treated by Mr. Bandelier at great length and with the most minute study of the authorities in connection with the investigations made by him at Cholula. See his *Archæological Tour in Mexico*, pp. 169-214.

HENRY W. HAYNES.

Boston, Dec. 29, 1886.



## TRIBAL AFFINITY OF SHICKCALAMY AND HIS SON LOGAN.

*Editor Am. Antiquarian:*

Your correspondent, W. M. Beauchamp, Vol. VIII:89, of the ANTIQUARIAN, quotes from Mr. Morgan: "Logan was one of the Cayuga sachems, but which one of the ten names or sachemships he held, is not at present ascertained. His father, Shikellimus or Shikalimo, who is usually mentioned as a Cayuga sachem, was but a chief." To this he then adds: "This seems mere assertion, and as Shikellimus was Executive Deputy of the Iroquois Grand Council at Shamokin, and as such ruled the Delawares; it is improbable that he was not of the highest rank." Again, in speaking of the

adoption of the Moravian Missionaries, he says: "We hardly understand how the adoption could have been as it was, since Shickelimo and his son were Cayugas, and by them Spangenberg was received into the Bear clan of the Oneidas, and Zeisberger into the Turtle clan of the Onondagas. Certainly the Cayuga chief must have been of the highest rank to have done this."

I should like to know upon what authority these and numerous other writers assert that Shickcalamy and his son, Logan, were Cayugas. The assertion seems to have passed current with a number of writers for a long time; but is there any authority for such classification? I call it in question, because those that knew him when living and were conversant with the tribes, classed Shickcalamy as an Oneida.

In the Minutes of the Council of Pennsylvania, August 23, 1732, there is a list of Six Nation Indians then in Philadelphia, and "Swataney alias Shekallamy" is given as one of the "Chiefs of the Oneidas."—Pa. Col. Rec., III:435.

In the Minutes of September 28, 1736, of a Conference in Philadelphia, "Takashwangeroras or Shekallamy" is given among the "Oneidas."—Col. Rec., IV:80.

In the Deed for the Susquehanna lands east of the Kittocthinny mountains, October 11, 1736, the name of "Shecalamy" occurs designated as an Oneida chief six times in the body of the Deed, and in the signatures his name is under the heading of the "Oneydas."—Pa. Arch., I:494.

The same classification recurs in the records of the Treaty at Philadelphia, July 12, 1742, where "Ungquaterughrothe alias Shikelimo" is distinguished as one of the chiefs in the "Anayints" delegation.—Col. Rec., IV:584.

In the list of Iroquois chiefs attending the Treaty at Lancaster, June, 1744, we find "Shickelimo" given under the head of "Anoyirds or Oneydas."—Pa. Arch., I:656. Anayints and Anoyirds are evidently typo-errors for "Anoyiuts," conforming to many mostly French spellings, the name being formerly four syllables, O-ne-i-da.

In Marshe's Journal of the Treaty at Lancaster in 1744, he relates that most of the Deputies were willing to sign the deed for Maryland, "but upon Shukelemy an Oneydoe chief's remonstrance, some of the others refused for that day executing it." His name is in the body of the Deeds given to Maryland and to Virginia, and heads the list as an Oneida chief.

The interpreter on each occasion was Conrad Weiser, and the list of 1744 is in his hand-writing; and the former were written by the Secretary under the supervision of James Logan, after whom the chief named his son. There could not have been found at that day two men better qualified to decide to what tribe this chief belonged than Weiser and Logan. They thus repeatedly and invariably designate him as an Oneida, and this evidence seems to be conclusive. The very name of this chief, from the presence of the letter "l" must have belonged to the Oneida language; and as they did not use the letter "m," its place should probably be supplied

with an "n," as indeed it was sometimes spelled; the name can not be Cayuga, and unless it be of Algonquin origin, it must be Oneida. Spangenberg was therefore probably adopted into this chieftain's own tribe and clan.

In the first list above referred to, we find "Tachnichtorous" as belonging to the Oneidas; in the list of "Anayints" in 1742, we have "Tagh-negh-docrus;" and in the list of "Oneydas" in 1744, we have "Ta-hack-nech-dorus;" these spellings certainly identify "Tagh-negh-dourus alias John Shickcalamy" one of Shickcalamy's sons and his successor.

Governor Hamilton, May 10, 1761, writes Gen. Amherst, that the Six Nations at Albany in 1754, "did then and there appoint John Sheck Calamy, one of the Oneida nation, living at that time near Fort Augusta, to be their Agent for those lands."

These classifications and the assertion of the Governor seem to be as conclusive as to the son as the others were as to the father. However, if Shickcalamy's wife was a Cayuga, his son "Logan" might still be a Cayuga, according to the Iroquois system of relationship. But is there any proof that this was the case? It has been said that Mrs. Shickcalamy was an adopted Shawanese, and if so it is hard to tell into what tribe she was received. Such writers as Morgan, Drake, and others, unless supported by good authority, can not be received in preference to contemporary persons familiar with such tribal affinity.

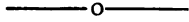
On the other hand the only evidence of a Cayuga affinity of Logan and his brothers that I have been able to find, is in the Minutes of a Conference held at Lancaster, in August 1762, where there was a large convocation of Indians (557) representing a great many (14) tribes, and in which "Dochneghdoris or John Shacalany" is classed as a Cayuga; and in a corresponding list given in the Archives, "Taghneghtoris or John Shikellimy, Soyeghtowa or James Logan, and Sagogeghyata or John Petty, Shikellimy's 3 Sons," are classed as Cayugas.—Col. Rec., VIII:729 and Arch., IV:91. Weiser and Logan were now dead and it is not very likely that the scribe on this occasion knew more than they did. We are ignorant of any authority for making a change in the face of the usage for near thirty years.

Shickcalamy was "sent by the Five Nations to preside over the Shawanese."—Col. Rec., III:330, 337, 404 and Arch., I:228. At a later day he also had the oversight of the affairs of the Delawares after they settled at Shamokin and vicinity. His services to the Government of Pennsylvania had already been of great value in 1728, Col. Rec., III:337, and it is not certain that up to that period there were any Delawares at Shamokin. It was in that year that Allummapees himself removed "from on Delaware to Shamokin." Some of the Shawanese had been there before. Some of the Munsays were on the North Branch the year previous.—Col. Rec., III:286, 326. There is no evidence that the other Delaware tribes were at Shamokin prior to the advent of their "king Allummapees." In fact it only became Shamokin, (corrupted, like Shackamaxxon,

from "sachem" and "acke" and "ink," at the place of the chief, or as we would say, the king's residence), after this king went there to reside. Shickcalamy lived on the south side of the Susquehanna below Milton, and did not go to Shamokin until after 1737.

A. L. Guss.

Washington, D. C.



## COLONEL CHARLES WHITTLESEY—A SKETCH OF HIS LIFE.

### *Editor Am. Antiquarian:*

Colonel Charles Whittlesey, late President of the Western Reserve Historical Society at Cleveland, was born in Southington, Conn., Oct. 4, 1808. His parents were intelligent and Christian people who in 1813 removed to Tallmadge, Ohio, a town settled by Congregationalists, led by Rev. Daniel Bacon, formerly a missionary to the Indians.

He went to school there until 1819. The influence of the town, of his intelligent father and of a mother well educated and easy in writing all educated him.

In 1827 he entered West Point where he graduated in 1831 and became a second lieutenant and started in November to join his regiment at Mackinaw. Through the winter he was at Fort Gratiot and in the spring of 1832 was assigned at Green Bay to the company of Capt. Martin Scott so famous as a shot.

At the close of the Blackhawk war he resigned. By varied experience his after life was given to wide and general uses.

He at first opened a law office in Cleveland and shortly became part owner and co-editor of the *Whig and Herald*—until 1837. He was on that year appointed on the Ohio Geological Survey.

That continued a scant two years when the ill judging state dropped it—the survey but partly done and still less reported. Col. Whittlesey had become interested in the works of the mound-builders and continued their survey, it being expected that Mr. Sullivant, of Columbia, and himself would issue a volume which would have been much like that of Squier & Davis. But Mr. Sullivant never entered on the publication.

Much of the material was lost. Considerable was furnished to Messrs. Squier & Davis who acknowledge his assistance in the highest terms. Some was published afterward, separately by the Smithsonian Institution.

Fortunately Col. Whittlesey had surveyed the largest and most extensive works, and the works at Newark, Marietta and elsewhere must always be better known from his surveys than from any other examination. In their extent they are ruined.

Farmers cannot raise crops without plows.

In 1845 he became geologist to a copper company of Detroit, and they landed their frail boat above the Sault St. Marie and coasted to Ontonagon.

The party narrowly escaped drowning, and the same night Dr. Houghton was drowned not far from them. A very interesting account of this trip was published in the *National Magazine* of New York and reprinted the Col. Whittlesey's volume called *Fugitive Essays*.

From 1847 to 1851 he was employed by the United States in surveying the Lake Superior and Upper Mississippi basins. He still continued these explorations as they had become a very agreeable to him.

In 1849, 1850 and 1880 he explored the Menominee. The Wisconsin Geological Survey says the South Range was first observed by him, and that many years ago he first drew attention to its merchantable ores.

He examined the copper range in Minnesota, and his report was published by the State in 1865.

He served upon the geological survey of Wisconsin during 1858, 1859 and 1860 until the war commenced.

Col. Whittlesey was at once awake to the war, and it was considerably due to him that Ohio was so ready for the fray, in which at first the general government relied upon the States.

April 17th, 1861, he became assistant quartermaster-general. He then served as State engineer in the campaign in West Virginia. For some time after Dec., 1861, he served wisely in Kentucky suppressing the rebel element and preventing confederate enlistments in Kentucky. He was present at the fall of Donelson and was sent north with over 10,500 prisoners. At the battle of Shiloh he commanded the 3d brigade of General Wallace's division, against which General Beauregard attempted to throw the whole weight of his command for a last desperate charge; but he was driven back.

Col. Whittlesey shortly after resigned in consequence of ill health, much to the grief of his regiment (20th Ohio) who expressed themselves that his "considerate care evinced for the soldiers in camp and above all his courage, coolness and prudence displayed on the 'battle field.'" He inspired all, so that "all felt ready to follow him unflinchingly into any contact and into any post of danger."

Col. Whittlesey rested and recovered until 1863 when his busy life again commenced as his published papers show. He continued explorations in the Northwest and in Ohio.

In 1867 the Western Reserve Historical Society was organized and he became and continued its president until his death in 1886; giving to it substantially his services.

It was to him a very pleasant, though laborious post. It gave him employment in congenial fields of literature, though there was also much drudgery.

That Society with its permanent hall; its large museum; its fine library, and its endowment is his monument.

The foregoing sketch is a mere skeleton of a varied and busy intellectual life.

Col. Whittlesey was distinguished in various lines of learning. He was an advanced, learned, and safe archæologist, whose infor-

mation and judgment were relied upon by all, and who was quoted by Prof. Wilson, Sir John Lubbock, Marquis Nadaillac, and all Americans with such safety and faith as is a rest to an archæologist. In some lines, as in the prehistoric copper mines of Lake Superior, his researches are the basis of present learning.

He was an original member of the American Association for the Advancement of Science, and made many valuable contributions to it. His many papers on geology and on changes of level in the lakes give vast original learning.

The number of his published books and papers (excluding mere newspaper articles) is at least one hundred and ninety-one. Four of these were quartos among the Smithsonian contributions; many were in the proceedings of the American Association; many in various public reports—United States or States; many in Magazines, and there were still left many for miscellaneous publication.

In 1867 he published an elaborate 8-vo. History of Cleveland; in 1855 Fugitive Essays—besides these no large volumes. His researches were largely original precluding the idea of large books but being of large value.

For several years before his death he was confined to his home by rheumatism and other painful illness attributed to the exposure of fifteen years in the regions of Lake Superior and the Upper Mississippi; but his mind was bright and he still active.

General Force, well said in a letter to his widow:

"Your noble husband has got release from the pains and ills that made life a burden. His active life was a lesson to us how to live. His latter years showed us how to endure; to all of us in the Twentieth Ohio Regiment he seemed a father. I do not know any other colonel that was so revered by his regiment. Since the war he has constantly surprised me with his incessant literary and scientific activity. Always his character was an example and an incitement."

C. C. BALDWIN.

Cleveland, Ohio, Feb. 1, 1887.

## Editorial.

---

Page 40

### ARCHÆOLOGY IN OHIO.

The State of Ohio abounds with prehistoric works and many of the citizens of the State are interested in the subject of Archæology.

The death of Col. Whittlesey has reminded us of the men who have done so good a work and of the part which the State has borne in the establishment of the Science. It will be remembered that Col. Whittlesey was one of the first to give attention to the subject, taking up the work which Drake and Atwater had laid down. He was followed by Messrs. Squier and Davis and gave them the benefit of his surveys but never ceased to take interest in the subject. The gentlemen whose names have been mentioned, may be regarded as the pioneers of American Archæology. In view of the work which has been done since, they deserve a tribute of respect from the present generation. They may be said to have laid the foundation of Archæology in the United States.

They builded better than they knew. They have had, however, excellent successors. The Societies which were established by them are still in existence; namely, the Philosophical Society at Cincinnati and the Northern Ohio Historical Society at Cleveland. Many of the members of these Societies take great interest in Archæology. Other Societies have since been established viz: The State Archæological Society at Columbus organized in 1876, and revived in 1885. The Academy of Science at Akron and Urbana; the Natural History Society at Cincinnati; the Historical Society of Licking Co., all have Cabinets, and members who are much interested in collecting and exploring. The Authors who have written upon Archæology are some-what numerous in Ohio. Prof. John G. Short prepared a valuable book, entitled, the North Americans of Antiquity, published in 1880. Mr. E. A. Allen, in 1885, published a book on the Prehistoric World or Vanished Races. Rev. J. P. McLean has published several books on Mound Builders, Man and the Mastodon Etc. The AMERICAN ANTIQUARIAN was started while the Editor was residing in Ohio. Isaac Smucker, Judge M. Force, Judge C. C. Baldwin, Prof. T. F. Moses and H. A. Shepard have written upon the subject. Col. Whittlesey as the pioneer has transmitted many monographs on Archæology and early history. The question now is, who will take up the clue and carry on the work? The gathering of relics is one thing, but the thorough study of the science is another. The State abounds with Archæological relics and these have been faithfully gathered. What is now needed, is that the science should be studied in connection with the relics, and the work which has been so well begun, should be carried on to completion.

# NOTES ON AMERICAN ETHNOLOGY.

BY D. G. BRINTON, M. D.

**THE BELLA COOLA INDIANS.**—This tribe dwells on the Northwest Coast, between 52 and 58 degrees, north latitude. Another spelling of the name is Vilxula, and this is preferred by Dr. Franz Boaz, who has been making a special investigation of their habits, language and traditions. In the last number of the *Mittheilungen aus der Ethnologischen Abtheilung der Museum zu Berlin*, there are articles upon them by both Boaz and Von Goechn. The former deals with them generally, while the latter speaks especially of their religious life, and through both these observers our knowledge of the tribe is considerably increased.

**THE SHINGU INDIANS.**—In a previous note I described the perilous and interesting expedition of Dr. Karl Von Den Steinen through the unexplored regions of Central Brazil, and his encounters with the wild tribes along the Shingu river. The collections of ethnologic material which he brought home are now stored in the Ethnologic Museum at Berlin, and his adventures and researches are related at length in a handsome volume with numerous illustrations which has lately been issued from the press in Germany. It contains a mass of linguistic material, an ethnologic map, and a well written text. For those who would keep themselves acquainted with the progress of exploration in Central Brazil, this volume is indispensable. The Indian's accolents of the Shingu river are in a state of nature, entirely uninfluenced by the whites and most favorably situated for the study of the American race in its purity.

**NABUATL CHRESTOMATHY.**—Under this title M. Remi Simeon has begun the publication in the *Archives de la Société Américaine de France* of extracts from the annals of Chimalpahin. His text is a copy of that in M. Aubin's library, and the extracts are especially for the use of the students who attend M. Simeon's course of instruction in Nahuatl.

**THE ORIGIN OF THE MAYA CHARACTERS.**—At a recent meeting of the Berlin Anthropological Society, Mr. E. D. Seler brought up the question as to the origin of the Maya Calendar. He announced his opinion that it was introduced into Yucatan from the Nahuas by way of the Guatemalan tribes, the Quiches and Cakchiquels, who in turn obtained it from their neighbors in Chiapas. The evidence for this opinion he considered as partly linguistic, partly derived from an analysis of the hieroglyphs themselves. Some of the day names in the Maya calendar he thinks, are deformed Quiche words which had no meaning in Maya. He goes still further and believes that all the Maya hieratic writing is a cursive form of the Mexican picture writing and derived from it. This, it need hardly be said, is contrary to the usual opinion which places the Maya civilization in its origin at a remoter period than that of Mexico, or at least of the Aztecs.

**PETROGLYPHS IN VENEZUELA.**—The rockwriting of the American aborigines forms a very interesting subject of study, and all authentic specimens of



it should be carefully copied. In a late communication to the Berlin Anthropological Society, Dr. Ernst, of Caracas, remarks that these inscriptions are common in many parts of Venezuela and sends a drawing of one. The figures are usually human heads in full face, with arms, hands, and rudimentary bodies. In addition to these, there are several of the circles and spirals which are so frequent in the rock inscriptions of Nicaragua, and which it has been supposed may have had a reference to the worship of the reproductive principle.

ANCIENT INSCRIPTIONS IN AMERICA.—In a paper recently read by Prof. Leon de Rosny before the *Société Américaine de France*, on the Various inscriptions and alleged inscriptions found in America of Asiatic or European origin,—for instance, the Rockford and Davenport Tablets, the idol of the Count of Guaquy, etc. The writer displays a judicious scepticism about these alleged finds, considering not one of them is above suspicion. But he treats with undue tenderness the celebrated *Libre des Sauvages* of the Abbé Domenech. That was indeed not an intentional falsification, but simply the most portentous blunder ever perpetrated in American Archaeology.

---

#### NOTES ON EUROPEAN ARCHÆOLOGY.

BY HENRY PHILLIPS, JR.

FOLK LORE.—Dr. Jahn of Stettin contributes to the *Corr. Blatt Deutsch-Anthrop. Gesell.* an interesting article on the survival of certain heathenish beliefs among the present inhabitants of Pomerania, as bearing on the question of the origin of that race. According to some authorities there was a Pre-Germanic population which totally and utterly disappeared, and in its stead a Slavonic tribe took its habitation. Then came a German immigration, which in course of time became intermixed with the German race. Of all the old deities the Pomeranians have most especially preserved the remembrance of Woden, whose name occurs frequently in more or less varied forms, as Wode, Wuld, Waur, Waudk Goden, Gauden, Gaur, etc. The Woden and Freia cult are found in the customs relating to sickness and death; the latter often appears in human form and gives good advice and acts friendly towards the people; his forerunners are fogs over the land which bring evil to man and beast. The winds, clouds and the stars are still looked on as sentient and existing beings and are addressed as such. The sailor will call on the wind as "old father, now come;" or even as "little brother." The belief in giants also exists, perhaps a survival from the aborigines of the land; dwarfs and spirits, goblins, spooks, house and water sprites, the latter remarkable for their beautiful songs; sometimes the water-sprite emerges from the lake in the form of a horse or pig. The nightmare is not wanting to complete the terrors of the primitive fancy. Witchcraft and magic are believed in. One idea is that certain corpses have the power to attract the living into their graves and to leave their graves between 11 and 12 to seek victims whose life blood they would suck. These they call *Neunteufel*, believing that their unholy powers could only cease when they had accomplished the death of nine human beings. In some communities the belief is that this ghastly work will only end with the destruction of the

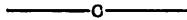
whole village among which the corpse is buried. The whole subject is full of interest and deserves the study it has received.

NEAR MEMEL, in East Prussia, in a burial place of Roman date was found a small plate on which was inscribed a series of concentric rings, filled in an artistic manner with colored enamels, some of which had been lost before the relic had been taken from the ground.

LATER EXCAVATIONS on the island Jankowo have been productive of further finds. Among these were four urns surrounded by stones and covered similarly by one larger one, irregularly in position. A child's rattle, a smaller earthen vessel, some clay pearls, two broken stone hammers, a horn needle, two iron knives, and a scrap of the same metal; this latter was met with at some depth in the ground, not in the upper strata. Mr. Pahlke, the discoverer, is of the opinion that a search at about five feet under the earth-level would be repaid by some valuable finds. Ashes were found at a depth of six feet.

MR. VIRCHOW, in the *Zeitschrift fuer Ethnologie*, p. 381, gives the results of the examinations of the East-Prussian Grave-fields for the years 1884 and 1885.

LATE EXPLORATIONS near Choene by Gueben, have brought to light among other objects an iron needle bent in the form of an "S" and ending in a broad, spatulated piece, about 12 cm. in length and 8 cm wide; the extremity is decorated with four small circles whose center is designated by a small point. It is the sole find of this character ever made in that locality and is referred to the so called La-Tene period.



## NOTES FROM THE FAR EAST.

BY PROF. JOHN AVERY.

THE PLACE AND TIME OF THE RISE OF ZOROASTRIANISM.—The region and age in which Spitama Zarathushtra, called Zoroaster by the Romans, instituted those reforms in the beliefs of the Iranian race which entitle him to a place among the founders of new religions have been a matter of no little dispute. Essentially the same data have, when viewed from different standpoints, led to directly opposite conclusions. The older theory, contended for by the late Professor Haug of Munich, and more recently by Professor Geiger of Erlangen, has been called the "ancient scism theory;" and represents that at a time when the Indians and Iranians were one people, a religious dispute arose on account of innovations introduced by the Brahmans into the pantheon or rites of the common faith. The Iranian priesthood remained true to the old objects and forms of reverence; and this led in time to a disruption of the nation, the Iranian, after perhaps centuries of dispute, going off and forming a separate community under the conduct of their high priest, Zarathushtra, who not only discarded the new heresies, but brought about some radical reforms in the orthodox faith.

The place where Zoroastrism was first preached, and whence it spread westward into Media and Persia, was Bactria. The time was conjecturally fixed at first by Haug as not later than 1000 B. C., but afterwards at about 600 B. C.

The learned among the Parsis hold to even an earlier date. Mr. Kharshedji Rastamji Kama, in his *Life of Zoroaster*, contends that the sage lived not later than 1800 B. C. Mr. Dosabhai Framji Karaka, an eminent Parsi jurist of Bombay, would add two or three centuries to that date.

The arguments usually relied on to support the views of this school are: 1. Among other signs of discordant religious views, the word *deva* means "god" in India, but "demon" in Iran; while *asura* is "evil spirit" on the Indus, but, under the form *Ahura*, the chief god of the western highlands. 2. The usages and the language of the Avesta correspond so closely to those of the Veda that they must have prevailed in adjoining countries. 3. The Avesta makes but one mention of the Magians, while the common title of the priestly order is Atharvan, a word drawn from Vedic usage. 4. The Avestan Calendar differs markedly from the old Persian one, and if the latter was derived from Media, as is commonly supposed, the same could not be true of the former. Professor Geiger lays stress upon the fact that: 1. The Avesta makes no mention of the Medes or Persians, who therefore could not have existed at that date as distinct nationalities, while at the same time it does speak of Babylon, as if it were a city still flourishing. 2. The Aryans of the Avesta were engaged in struggles with nomad tribes, while the Magians of the 6th century B. C. contended only for political ascendancy in an organized kingdom. 3. The composers of the Avesta were unacquainted with salt, glass, coined money, and iron, for which last bronze was used. All these alleged facts conspire to prove that Zoroastrianism and its Scriptures had their *origin* in eastern Iran before the rise of Median or Persian dominion. At the same time it is not denied that this creed reached the climax of its development and its greatest political influence farther west and in a subsequent age.

The second of the two principal schools of Avestan criticism, while not denying a remote relation to religious differences among the Indo-Iranian people, holds that the Avesta has not the age claimed for it by the other school, but is for the most part the work of Media and the Magians at the time of Darius Hystaspes. At the same time it is not claimed that the Avesta was all composed in a single century, but parts of it may date back to the 7th or 8th century B. C., when too it is possible that Zoroaster himself may have lived. This last statement would make it impossible for Zoroaster to have been chiefly concerned in the spread of the religion which bears his name. This school has its most persistent and ardent advocate in Professor de Harlez of the University of Louvain, whose latest presentation of the case is found in Bezzenberger's *Beiträge zur Kunde des indogermanischen Sprachen*, Band XII., S. 109-124, and whose views were set forth at greater length in his polemic against Darmesteter's meteorological theory, under the title *Des Origines du Zoroastrisme*, Paris, 1879, and in a paper read before the fifth Oriental Congress, Berlin, 1882. M. de Harlez argues in substance that the old Persian language bears as close a resemblance to the Vedic Sanskrit as does that of the Avesta, and that Strabo tell us that the religious conceptions and usages of western Iran were similar to those prevailing in eastern Iran. The fact that the Magians are named but once, under the form *Maghu*, is explained by supposing that they found it for their interest to assume the older title Atharvan, and that it is under this designation that they are commonly referred to. As to the difference of Calendars, that of Persia shows traces of a western origin in Susiana, Assyria, or possibly Egypt. This, which was of profane origin, was employed to regulate civil affairs; while another one, of priestly invention and found in

the Avesta, was employed in religious ceremonial. The Medes and Persians do not appear by name, since such reference would be inappropriate in a mythical and liturgical collection like the Avesta; further, the reference to Babylon appears to be in myth, since it is described as the residence of Thraetaona, the serpent-destroyer of old Iranian legend. As to the absence of mention of salt and other articles of common use, at a later time, M. de Harlez in part denies the fact, and in part insists that negative evidence does not prove that the articles in question were unknown.

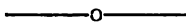
As positive evidence of the Median and comparatively late origin of Zoroastrianism, the Professor points to the nearly consentient voice of antiquity, ascribing the origin of this faith to Media; and further that the Avestan belief in the pollution arising from human corpses, and the regulations for disposing of them are said to have belonged to the region south and south-east of the Caspian Sea; that the town of Raghā, known to the authors of the Avesta as the chief city of the Atharvan priesthood, was undoubtedly in Media; and that the legend which makes Bactria the cradle of Zoroastrianism proper, and Vistasp, the patron of Zoroaster, a king of Bactria is unknown to the Avesta or the Pehlevi glosses. A distinct feature of this theory, and one suggested as early as the time of Hyde and Prideaux, is that the reforms in the old Iranian faith, introduced by Zoroaster or his successors and constituting Zoroastrianism, may have taken shape under the influence of Jewish or Turanian populations settled about Media. This would help to explain certain striking coincidences between Zoroastrianism and the religions of these peoples.

---

The Parsis of western India are the spiritual, and in a great degree the ethnical, descendants of the old Zoroastrians of Persia. Living in a compact community and separated by religion and occupation from the mass of Indian population, they have preserved almost intact the rites of their ancestral faith. They are divided into two sects, called *Shenhshais* and *Kadmis*. These sects are based, not on differences of religious belief or practice, but upon a chronological dispute. When their ancestors were fugitives from Mohammedan oppression, the insertion of intercalary days in the Parsi year to make it correspond with the solar year was neglected, hence the uncertainty as to the month when each new year of their era—that of Yazdazard, the last king of ancient Persia—should begin, whether on the 19th of August or on the 19th of September.

The Parsi are commonly called *Fire-worshippers*, as if that element were itself, like *Agni* in Vedic times, an object of superstitious regard; but this they specially disclaim, affirming that fire is only the symbol of God, whom alone they worship. Their sacred rites are in great part performed before the consecrated fire in the fire-temples, of which there are seven of the highest grade in India, called *Atash-Behrams*, and more than a hundred of the second grade, called *Atash-Adarans*. The fire in these temples is fed day and night with sandal wood, and is never allowed to go out—in fact it is said that the Parsi fugitives from Persia brought sacred fire with them, which has been kept up continuously ever since. When a fire is desired for some new temple, it must be specially prepared. A perforated metallic tray, containing chips and dust of sandal wood, is held over a temple-fire until they are ignited. Then a second fire is procured from this in the same manner, and so on for nine times, until by successive sifting out of the earthy and baser qualities of the flame a

pure and ethereal element is produced. Fire coming directly from heaven, that is by lightning, is most highly esteemed. The household fire is only in a less degree sacred and should never be extinguished. In the morning it is saluted by each member of the family with a handful of sandal wood. These fire-ceremonies are designed, say the more intelligent Parsis, to keep ever present to the mind the duty of preserving the thoughts, words, and deeds from all impurity in the sight of the One Supreme Deity, and are in no sense idolatrous. While the priest tends the fire, his mouth is covered with a muslin veil that no defilement from his breath may reach the flame. He chants prayers at stated intervals, sitting cross-legged before the fire and holding the *barom-beresma*, in the Avesta, or bundle of twigs in his left hand. The prayers are in the old language of the Parsi Scriptures, written in the Gujerati character, and are seldom understood by those who repeat them. The chief offering of the Parsis is the Homa juice, corresponding to the Soma of the Hindus. This should be used twice a day, both in private houses and in the fire-temples. Flowers, fruits, and confections are also devoted to religious uses. Parsis have a special dread of defilement from a human corpse or from anything cut off from the living person, such as nails or hair; and elaborate ceremonies are required for purification. The soul does not leave the vicinity of the body until three days after death, during which time a priest constantly recites prayers for the repose of the dead, standing before a fire fed with sandal wood. When the relatives of the deceased are persons of means, it is usual to perform some commemorative ceremony every day during the first year and on subsequent anniversaries. The last ten days of the Parsi year are specially set apart for such observances. At that time the absent ones are believed to be particularly gratified by evidence of faithful recollection. A room in the house, after being thoroughly cleaned and whitewashed is decorated every morning with the choicest flowers and fruits, and the friends visit it during the day for prayer or meditation.



#### LINGUISTIC NOTES.

BY ALBERT S. GATSCHET, WASHINGTON.

CHINOOK JARGON.—The latest vocabulary which we have seen of this trade jargon of the Pacific Coast was issued by T. N. Hibben & Co., publishers at Victoria, B. C., 1888, and has the title: "Dictionary of the Chinook Jargon or Indian Trade Language of the North Pacific Coast." It contains 85 pages in octavo, and is mainly based on G. Gibbs' larger publication made in 1868 by the Smithsonian Institution. The Indian missionaries have taken hold of that means of inter-communication, have composed in it extensive collections of hymns, and preach in it every Sunday to the "benighted heathens." According to Gibbs' preface, of the 500 terms which he embodied in his collection; about one-fifth are of English origin, two-fifths are borrowed from the Lower Chinook language and the rest is made up of Canadian French and some native languages other than Chinook. The Hibben pamphlet is divided in two parts: Chinook-English and English-Chinook.

FROM DR. NICOLAS LEON, the founder and director of the Museum of Michoacan State, at Morelia, we have received an alphabet primer of the Tarascan language, intended for the most elementary instruction in schools. The words

are divided in series of one, two, three, etc., syllables, and the "Silabario" bears on the title page the endorsement of D. Francisco Pimentel. We learn from it that the name of Querétaro City is Tarascan and signifies *ballplay*. (Morelia, 1886, 16mo., pp. 19.)

Another little pamphlet of his is entitled "Notes upon the *Medical History* of Michoacan from the pre-columbian epoch down to the year 1875." Morelia, 1886, 16mo., pp. 80; Appendix pp. 47. (Documents.) It appears that the Tarasco Indians, whose habitat is in Michoacan, anciently had two kinds of medicine men; the *siquame* or "hechizeros," and the *xurhica* or "medicos."

CHUCHON AND MAYA LANGUAGES.—Count H. de Charencey has just re-published in the "Actes de la Société Philologique," of Paris, France, the *Doctrina christiana* in the Chuchon language of Southern Mexico as composed by the Padre Bartholomeo Roldan and printed at Mexico 1580; Pedro Ocharte, printer. This book of the Dominican Father had become so rare, that Count de Charencey had to use a manuscript copy of it made in 1867 by Dr. Léon Reinisch at the Hacienda of Tepopotla in Tetzecoco. The document fills 82 pages in octavo and is printed in two columns, one for the Chuchon and the other for the Spanish text. To pronounce correctly the numerous gutturals in the language, as *kh*, *qh*, *chh*, a vowel has to be inserted between the two consonants, as *qaha*, *chaha*. Man. Orozco y Berra locates this language upon the 19° degree of latitude, south-east of Veracruz and south west of Puebla, about 100 miles from each of these two cities, and calls it Chocho; this brings it within the limits of the state of Oajaca. It is still spoken in Coixtlahuaca, and other places, and a careful comparison of this only document now on hand might possibly prove the affinity of Chocho with Tlacopan and Mixtec. In 1884 the same indefatigable scientist has published, in Vol. XIII of the "Actes" of the same philologic Society, a *Vocabulaire Français-Maya*, embodying 87 octavo pages and over 3300 terms of the language.

CHILIAN LANGUAGE.—In addition to the valuable manual of the Jesuit Father Havestadt, Mr. Julius Platzmann, Dr. Phil. in Leipzig, has just republished in a facsimile edition another important work on the Chilian language or "Chilidengu." This is the "*Arte Vocabulario y Confesionario compuestos por Luiz de Valdivia*" Leipzig, B. G. Teubner, 1887; 12mo. The original of the Confesionario and also of the *Doctrina Christiana* appended to it was made public by the Jesuit Valdivia at Lima in 1606; the translations of the several chapters in the Chilian language do not stand upon the page opposite the Spanish text, but follow immediately after it. Many special types had to be cut to do justice to the peculiar sounds of that South American tongue. In the vocabulary the items are rather short, but the collection of words is copious and may exceed 12,000 terms. Platzmann's beautiful re-edition now enables us to compare the status of the Chilian tongue of 1606 with its status 150 years later, for that is the period when Havestadt issued his more extended work.

MULLER'S OUTLINE.—Prof. Dr. Friedrich Müller of Vienna has now completed as far as the most important part of his self-imposed task is concerned, his *Outline of Linguistic Science* (Grundriss der Sprachwissenschaft; Vienna, A. Hölder, 3 Vols., 1886-1877). No other nation but the German can boast of a more comprehensive and useful work on the general principles as well as on the details of linguistic science. The second or special portion of the work gives us the phonetic and morphologic elements of more than two hundred languages

of all parts of the globe, without omitting even the Australian tongues, and the very imperfectly studied languages of the Mexican and South American interior. The better a language has been studied in recent times, the more information will be found on it in the pages of the "Outline." The Aryan, Semitic, Ural-Altaic and Malay-Polynesian languages belong to the best studied class, and even linguists who have paid much attention to these will find here linguistic facts mentioned which will surprise them. The same may be said of the languages of the Caucasus, which were but very imperfectly known before Schiefner's publications. The Armenian, as a link in the Eastern Aryan family, is treated as fully as many languages of the same stock, which had been investigated for a much longer period. The lexical element of the languages was excluded to give more space to the grammar, which is the real life-blood of all human speech. Two supplementary volumes will deal with the medley languages (or jargons), and with languages that have but very recently been made public.

**ARYAN VOCALIC SYSTEM.**—This is a subject which, on account of its fundamental importance, has occupied the minds of the best investigators for many years. The most recent publication is Prof. H. Hübschmann's: *das indogermanische Vocal-system*: Strassburg. K. J. Trübner, 1885. 8vo., 192 pages, which on its first pages gives a catalogue of all the recent writings on the subject. Hübschmann acknowledges the great advance made by F. de Saussure, (1879), in our knowledge of the vocalic series and system, but proposes some modification of his ideas, which, however, he wishes to be considered as hypotheses only. He also approves Saussure's theory of dissyllabic roots, and gives instances of such on pp 181, 182. His publication is divided in two parts: 1. The long vowels of Sanscrit and its series of long vowels. 2. The several vocalic series of the primitive indogermanic tongue. It will be noticed that German linguists use the term *Aryan* only for the dialects of India, Iran and Persia, which are of the indogermanic family, while to the English scientists *Aryan* is identical with *indogermanic*.

**THE NOTES ETYMOLOGIQUES** of Prof. Victor Henry, Douai, D<sup>pt</sup>. du Nord, France, which he published in 1896 in the *Mém. de la Société de Linguistique*, Vol. VI., No. 2; pp. 16, refer to the classic languages and chiefly to Greek, a language upon which the author has composed several erudite treatises. One of the articles deals with the Latin case-suffixes which were formed from the original *bh*; of these he traces *four*. The Greek pronoun *autós* is brought down to a radix signifying: *to blow or breathe*, and the original meaning of the base *autó* is *blown*, hence also: *breath, life, soul*. As to the Latin conjunction *sed*, he agrees with others in deriving it from the reflective pronoun *sui, sibi, se*. Another meritorious work of Prof. V. Henry is the publication and translation of thirty stanzas of the Sanscrit book *Bhāmini Vilāsa* with commentaries. Jagannātha Panditarāja is the author of this book, the title of which signifies "Amusement of the Beauty;" he probably lived from 1550 to 1600. It consists of four sections, each of them following a different tendency; the first being gnomic, the second erotic, the third elegiac, and the last ascetic. The 385 stanzas it contains are varying considerably in their metrics, and the commentary by Manirāma, which Henry had added, was written in 1803. Full title of the book: *Trente stances du Bhāmini-Vilāsa, accompagnées de fragments du Commentaire inédit de Manirāma; publiés et traduits par Victor Henry*. Paris, Maisonneuve frères et Ch. Leclerc, 1885. pp. 73; 8vo.

G. GROEBER'S ROMANCE PHILOLOGY.—For the purpose of editing a comprehensive, almost encyclopedic work upon the Romanic or Romance languages of Southern Europe, Prof. Gustav Groeber, of Strassburg university, has brought together a bevy of not less than twenty-five specialists in this line, and the series has to appear in 6 numbers of about 230 or 300 pages each, with occasional charts and illustrations. The first number has appeared and the title is: *Grundriss der romanischen Philologie*, etc., herausgegeben von Gustav Groeber. 1e Lieferung. Strassburg, Truebner K. J., 1883. 8vo.; 280 pages. The articles of this *introductory* number are all composed by the editor himself, except the treatise upon the oral sources of Romance philology, which is from the pen of W. Schum, and another on the methods to be followed in studying the philology of these languages, by A. Tobler. What has appeared is very creditable to the authors through the copiousness of information presented in a condensed form. It may be truly said, that the bibliography of these sciences is presented here in the most complete form imaginable. The Italian language will be treated grammatically by Fr. d'Ovidio, Roumanic by Tiktin, Rhetoromanic by Gartner, French and Provençal by Suchier, Catalan by Morel Fatio, Spanish by Baist, Portuguese by Cornu, and the Creole and Creole languages by Schuchardt. The literature of all these languages will be historically dealt with by a number of other thorough scientists. A similar series is now prepared by the same publisher, K. J. Truebner, for Germanic Philology; and it will appear under the editorship of Prof. Herm. Paul, Freiburg, Baden.

ON THE PHONOLOGY OF AUSTRALIAN LANGUAGES is the title of a small pamphlet issued by Prof. Georg Gerland of Strassburg university, (1886; 8vo., p. 9), in which he seeks to find the cause why the sounds *f*, *s* and *h* are wanting in all the Australian languages hitherto explored. The sound of the English *th*, which is closely cognate to the *s*, exists in many dialects of that distant country, and so does our *ts*. Gerland thinks that these tribes never possessed these three sounds in earlier times, unless they would have been substituted by cognate ones in these dialects. Their isolation from the rest of the world accounts for this, and primitive nations generally possess coarse, rough articulations produced with a straining effort of the vocal organs. The smooth sounds in language develop at a later period, like palatals and fricatives, and the area of the dialects, where these are found, is generally a limited one.

---

## ETHNOGRAPHIC NOTES.

BY ALBERT S. GATSCHET, WASHINGTON.

FOKLORE OF TINNE TRIBES.—Emile Petitot, formerly a missionary among the Loucheux and other Tinné tribes inhabiting lands under the Arctic circle of North America, has just published a very attractive volume in French, containing myths, legends, traditions, animal stories and a series of curious ethnological appellations collected among the Dindjié or Loucheux, the Hare, Dogrib and Slave Indians, and also some of the Chipewayans, Yellow Knives and Beavers. These all belong to the Tinné family; from other families he has added tales of the Western Eskimos, the Crees and the Blackfeet. The majority of the stories come from the Hare Indians, for Petitot remained with no other tribe as long as with this one, at Fort Good Hope; several are given in the



Indian language, with interlinear translation. The stories are mostly short, but very instructive to ethnologists; it affords a curious pleasure to follow the aboriginal, unbiased mind of the Tinné story-tellers through the devious mazes of their wild imagination. The book forms Vol. 23 of Maisonneuve's "Littératures populaires de toutes les nations," and its title is: *Traditions indiennes du Canada Nord-Ouest*, par Emile Petitot, ancien missionnaire, Paris, Maisonneuve, 1886, 12vo.; XVIII and 522 pages.

NOTES ON THE HISTORY OF COAHUILA AND TEXAS are now being published in book form by Mr. Esteban Portillo at Saltillo, the capitol of Chahuila State. The work is published in numbers of 16 pages each, and contains a historical sketch of these two territories, which were in the 18th century united under one provincial government. Mr. Portillo has before him a large number of original documents from which he derives his dates; one of the earliest facts mentioned by him is the foundation of Saltillo (1575), and the transfer of 400 Tlaskaltecan families from their southern homes to this northerly point in the wilderness. Here they had to be helpful in repelling the attacks of the mountain tribes, the Guachichiles and Borrados. When completed, Portillo's book will hold 500 pages. The numbers can be ordered from Mr. C. Valdez, editor of "*El Herald*" (newspaper,) North Flores Street, San Antonio, Texas, and contain many items of value for ethnography. The title of the book, which is in Spanish, reads as follows: "Apuntes para la historia antigua de Coahuila y Texas." Saltillo, 1886. 8vo.

ARTICLES ON AMERICA.—The 1886 volume of Cotta's "*Ausland*," published in Stuttgart, Germany, and just completed in 52 numbers, has brought many articles on America penned by special correspondents or explorers, and some of them of singular interest. Thus we find the description of a long trip through Mexico from north to south, by v. Hesse-Wartegg; the explorations of Dr. Ten Kate in North and South America, and his article on the Apaches; Historic Sketch of the Comanches; the Snake Dance in Arizona, among the Moquis; Pasture-lands and Precious Metals in the U. S. Tornados, coal fields, climate, ornithology and practice of law in North America; the Canada Indians, Geological collections in the U. S., Halifax; Lake George, Niagara, Chihuahua, Fort Griffin (Texas), San Antonio, Lake Nicaragua, Bolivia and the Andes sketched by various authors. The basin of the Orinoco River. French annexations of land on the Maroni River.

DR. TEN KATE'S TRAVELS OF EXPLORATION in Dutch Guyana, South America, are described at length in the *Revue Géographique internationale* of Paris, in the Nos. of January and October 1886. Ten Kate arrived June 13, 1885, at Paramaribo, visited the Indian villages on the Upper Pará, and then struck out for the Aucancer negroes and some Arowak tribes. Other settlements of bush-negroes were seen by him on the Upper Saramacca, and traveling in these parts is extremely fatiguing. The Caribougs on the Ametali were found to be a mixture of Indians with blacks, and so are the Caribs upon Wayombo river. The Arrowaks there he found divided in *clans* or *gentes*, and and took measurements of many individuals. He then descended the Lower Nickerie, and tried to ascend the Corentyn, but an attack of fever forced him to return to Nickerie town on the estuary of the Corentyn. After visiting the Warrou Indians at Oreala, he disembarked at Skeldon, in English Guyana, from which place he came to Georgetown and the Essequibo, finally

crossed over to Carácas in Venezuela by land and, much enfeebled by constant attacks of fever and ague, embarked for New York. He states that the country of Suriname is economically neglected and decaying. The majority of the plantations, especially those which raise sugar, are abandoned, and forests soon grow upon the clearings on which the farms stood. Lazy creoles of all color and shades are the domineering element in the population, and of Jews there is a great profusion.

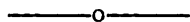
To give the results of former craniologic measurements, Dr. Ten Kate has composed lately the following articles: *Sur les crânes de Lagoa-Santa*, (Brazil), in *Bull. Soc. d'Anthropologie*, 1895, March 19, pp. 7, and *Description d'un crâne d'Indien Moqui*, illustr., in *Archives Néerlandaises*, Vol. XX., pp. 9.

**A NEW GERMAN-AMERICAN MAGAZINE**—The expectations of the Germans in America concerning the new magazine which was advertised to appear soon in Cincinnati, have been fully met with by its first number. The scope of the *Deutsch-Amerikanische Magazin* is a wider one than that of the Anglo-American monthlies, for it intends to grasp also the wide domain of *science*, (historical and natural), a field which is usually avoided by our magazine editors for fear of losing their readers. The editor and publisher, Henry A. Rattermann, is favorably known by his long editorship of the "Deutsche Pioneer," and probably no man in the west knows more of the history of German settlements and prominent German characters in America than Rattermann. The new magazine is a quarterly, and appears at 208 Vine Street, Cincinnati, O. The first number holds 161 pages and has for a frontispice the portrait of the patriotic FRIEDRICH KAPP, the historian, whose biography is one of the more important articles in the publication. This biography is a fair specimen of the publisher's purpose "to create a literary focus or center for the German-American population, by depicting in the new magazine German men, German life, German science and art in the United States." Other articles composed in the same patriotic strain are Doebla's *American Campaigns, 1777-1783*; *German Conventions, (1837-1842)*; *Speech of Judge Stallo*; *German-American Authors, list of*; the youth of General Peter Muehlenberg, etc. Among the poems we notice *Quautimotzin* (the Aztec hero), by Kara Giorg, the nom de plume of Dr. Gustavus Bruehl, and another "*Idyl to Mexico*," by the same poetically inspired author. It will be found on p. 167 of the second number of the "Magazin" which has just reached us. This second number (pp. 165-316) brings the continuation of Muehlenberg's and Fr. Kapp's biographic sketches, also that of Doebla's diary of revolutionary campaigns. Among the new articles we mention the lives of General August Moor and of Augustin Hermann, by the editor; the history of the German-American Press down to the year 1850, and the German-American newspaper in the 18th century, by Dr. Oswald Seidensticker of Philadelphia; *Memorial Discourse on Carl Maria von Weber*, read on Weber's centennial birthday in the German Literary Club at Cincinnati, Ohio, by the Editor.

**ETHNOLOGY IN BERLIN.**—The administration of the Royal Museum in the German capital, Department of Ethnology, has published a fourth number of its *Original Mittheilungen*, (40, Spemann in Berlin, 1886, pp. 177-232 and two plates). The meritorious director, Prof. Adolph Bastian, accompanies the publications with two of his articles, in which he gives a historic sketch of the evolution of ethnology. Herder's famous book "*Idea of a philosophic history*"

of mankind" has been helpful for establishing correct views on ethnology, and this comparatively new science must become the interpreter of psychology through natural science. A full catalogue of the objects manufactured by natives on the Xingú River, Brazil, and brought to Berlin by the successful explorer of that river, Mr. Karl von den Steinen, is contained in this number; also articles on African collections, ethnologic researches on the Maldive Islands, and on the religious life of the Bilkúla Indians of the Northwest Coast of British Columbia. Dr. Francis Boas, who has just returned east from a tri-monthly trip to Vancouver's Island, east side, and the main land opposite, gives many interesting myths and other particulars upon the same Bilkúla Indians, who up to the latest years have practiced human sacrifices for a cannibalistic purpose.

PREHISTORICS OF BAVARIA.—The sixth volume of the *Beitrag zur Anthropologie und Urgeschichte Bayerns* edited by Nic. Ruedinger and Prof. Johannes Ranke, is now complete in four numbers, (*Munich*, Theod. Reidel 1885. Lexicon-octavo, 165 pages, 28 plates and one map.) As the organ of the local society for anthropology and pre-historics, this periodical enjoys a well-earned reputation for the erudition of its contributors and the fine illustrations, which are profusely scattered throughout its publications. The archæological map of Bavaria (in 15 sheets) has been completed long before this, and is one of the best achievements of the society, though Prof. Ranke did the most meritorious work in compiling it. Some of the more important articles in Vol. VI. are as follows: Zapf, fortification on the Waldstein; Naue, tombs near Pullach; Mehliis, tombs at Leimersheim, (Bavarian Palatinate); Naue, pre-historic swords; Dr. Mies, a new instrument for craniometry; Ranke, H., Craniology of the Celtic Race; Fressl, ancient limits between Bavarians and Swabians; Vierling, on dialectic forms near extinction; Mehliis, archæologic researches near Gräfenberg; Weber, new prehistoric finds in Bavaria.



## LITERARY NOTES.

BY THE EDITOR.

ROCK HOUSES.—In the geological survey of Alabama, we read that there are in Marion Co., deep, dark, wild looking gulfs which are surrounded on three sides by high perpendicular bluffs; that in these bluffs, under the overhanging cliffs, there are numerous rock houses. These rock houses commonly occur along the base of the bluffs, but occasionally are seen midway up. They vary from a few feet to hundreds of feet in length and forty to fifty in height. Many of them have served as burial places for a former race of people and for homes for refugees and criminals.

FORT ANCIENT.—Two or three letters have appeared in *Science* calling attention to the recent or comparatively modern date of this so-called ancient fort. The theory was first started by Dr. Cyrus Thomas who seems to have taken it as his special hobby to prove that the mounds are all very recent in their origin. He has been followed by Mr. Charles A. Hough, and Mr. C. Abbe. The works at Fort Ancient are known to be as massive and as extended as any works of the mound-builders in the Valley of the Ohio, and they differ very much from

the stockade forts of the modern tribes as much as they do from the pyramids of the southern mound-builders. There are two enclosures at Fort Ancient. It is possible that, as Dr. Thomas suggests, one was built subsequent to the other as here the walls are much lower and more rude, and have not the same clean cut, square built shape that the walls around the other enclosure have. This would, however, only prove the two periods of occupation. It is said that the covered way has a pavement underneath the soil which stretches from wall to wall. Dr. Thomas however did not see fit to test this common assertion which a farmer residing near had made.

THE appearance of an Art Magazine which is designed to be exclusively American, is welcomed. The hope is that it will be sustained. Every page in the December number has at least one picture. Some of the pictures especially the wood cuts, are excellent specimens of engraving. The lithographs are not so good. From the table of contents we should select "Art in Book Illustrations," "Artists in Japan," and "American Home Decorations," as the best. The magazine has not yet entered into the field of pre-historic art, but doubtless will, if the patronage given to it shall warrant the effort; as a magazine devoted to American Art certainly should do.

MR. J. H. HARRIS of Waynesville, Ohio, informs us that he is endeavoring to locate the mounds and ancient burial places of that vicinity. He has a fine collection of archæological relics.

A VOLUME published by the Providence Historical Society entitled "Simplifications Defense against Seven Headed Policy" by Samuel Gordon has been received. The contest between Massachusetts and Rhode Island is here brought before us. There are some things relating to the Indians in the book which are significant. Among others, the signatures and marks fixed to treaties, e. g. That of the Sachem of Showhomot is a pipe; that of the Miantonomi is a bow and arrow. That of the Son of Cononicus was a hatchet, and that of Tomanick was a rabbit. Were these totems of the clans, or were they individual names?

GENERAL BRADSTREET'S MISFORTUNES.—Col. Chas. Whittlesey during the last year of his life prepared a pamphlet on this subject. Bradstreet made a treaty with the Indians to meet him at Sandusky. After going to Detroit he returned to Sandusky and waited with his army for the Indians to come. They did not come and he set out with his armies in bateaux, to return to Buffalo. They stopped at Rocky Run west of Cleveland, but while here one of those singular tide waves which occasionally rise in the lakes came up and wrecked about half of the vessels. He then ordered a portion of his troops to march overland to Erie. They were without provisions and suffered much by the way. The traces of General Bradstreet's army have been found. Prof. Kirtland discovered fragments of the bateaux in the river and the lake. Two skeletons with muskets in their hands, but the barrels, rusted through where they were held, were discovered near Ashtabula harbor; these were persons that had been shot, perhaps soldiers of Bradstreet's army. The same misfortune attended his passage through New York State. It was a terrible march.

CICERO IN SCHOOLS.—"Education" for January has an interesting article by Adeline H. Knight in which the effect of the study of Cicero upon young

pupils is graphically described. The patriotism, high-toned morality, the pathos of human life in his thoughts, his vivid force, the rush of his style in which he speaks with his whole frame, are brought out very clearly. We believe that Cicero has done more toward inspiring and awakening the minds of young men than any other classic author, and we heartily indorse the article.

**MENE, MENF, TEKEL, UPHARSIN.**—An interesting article on the hand writing on the wall is found in "Hebraica" for January '87, by Monsieur Clerman Ganneau. The explanation is given that the words are derived from the Aremean names of weights as follows: Mene-Mina; Tekel, the shekle; and Upharsim-peras; signifying the weight, and the half-shekel, and the weight divided. This is novel, but it was suggested to M. Ganneau by a set of bronze lion weights from Ninevah in the British Museum. There are many points of interest in the article.

#### REPRINT.

**TOTEMS OF THE SHOSHONI INDIANS.**—The tribe of Indians known as the Shoshoni, or more frequently and erroneously Snakes, is one of a number constituting what is recognized as the Shoshonian linguistic division, the several branches of which formerly extended over the greater portion of the country between the Rocky Mountains and the Sierra Nevada, and from northern Idaho south to Arizona, and westward to the Pacific coast of Southern California. Most of the western and south western tribes and bands of this division are known as diggers, a term used on account of their subsisting upon roots, grass seed, insects, reptiles, etc. According to Buschmann and others, this linguistic division is an offshoot of the northern branch of the Nahuatl linguistic division, of Mexico.

The following myth is a translation of the original text as obtained by the writer, and is one of the numerous stories told around the camp fire during the long winter evenings. The idea prevails that these apparently mythic characters were, in remote times, simply human beings, possessing names of animate or inanimate objects. This system of naming obtains even at this day, and it is probable, from other evidence found among the various tribes, that after a few generations an individual possessing an animal name is forgotten as of human form, but the form of the animal is associated, in the minds of the Indians, with the name which he bore. This comes from the custom of naming the several gens, or clans of a tribe, after animals, or other objects, as the Panther gens, the Coyote gens, &c. The members of a gens, as the Panther, have specific names, but still, are also known as Panthers. The gens is consanguineous, and marriage within the gens is a crime. Therefore, as in the following myth, the Coyote married the Panther, clearly signifying that a distinguished brave of the Coyote gens married a girl of the Panther gens, which for some inexplicable reason serves as a story which is implicitly believed, and in consequence of which the Coyote—*canis latrans*—has thus far run over the plains of Idaho unmolested by these people, who say, in response to inquiries pertaining to the toleration of this noxious beast, "He is our Father."

#### THE COYOTE AND THE PANTHER.

Izapa, the Grey Wolf, and his son, the Coyote, were hunting food one day without much success, when they both decided upon leaving the timbered hill-side and trying the water-courses which were densely fringed with luxuriant growths of willows. They had proceeded but a short distance over the

grassy meadow when they espied a lodge which they approached very cautiously. Izapa entered the lodge and found it inhabited by the Panther and her two daughters, both of whom were very beautiful. When asked the object of his intrusion, Izapa replied that he and his son were very hungry in search of something to eat. The Panther mother invited the Coyote to enter the lodge and asked both visitors to wait until she could serve them. The Panther girls were then told to catch some ducks and prepare them for their guests, which was soon accomplished. During the feast, the Coyote fell desperately in love with the two Panther girls and wanted to secure one of them as his wife. He asked his father, the Grey Wolf, to plead with the Panther girls and their mother, that he might obtain the object of his desire.

In answer to the request, the Panther mother replied, that as they were strangers to one another, it would be necessary to put the honor and bravery of the Coyote to a test, and in accordance therewith directed him to follow the stream until he reached a large, flat, granite boulder, which he was to mount and rest upon until next morning, after which he was to return to the lodge. He was particularly enjoined not to think lightly of this simple test, and was not to put his paws, or tail, into a crevice in the top of the rock.

Izapa, the Grey Wolf, told his son, the Coyote, to do as he was bidden, and be careful not to go near the crevice on the rock, as there was some danger to be expected if the directions were not complied with. The Coyote left the lodge and was very eager to reach the rock of which he had been told. When he finally came to the place, he was surprised at the apparently insignificant size of the rock as the regions in which he dwelt were filled with immense masses of rocks and cliffs, in comparison with which this cleft rock appeared as almost nothing. The Coyote was amused, and finally became abusive, calling the Panther mother all kinds of names for her silly whim. He tauntingly approached the crevice, and pushing his bushy tail towards it defied it to grasp him. Nothing occurring to cause alarm, the Coyote became emboldened, and finally thrust his tail fairly into the fissure, when the rock closed upon it like a vice. Then the Coyote howled and called his father, the Grey Wolf, but the latter being asleep in the lodge could not hear him. When morning came, and the Coyote did not return, Izapa, the Grey Wolf went in search of his son, the Coyote, soon finding him a prisoner of the cleft rock.

The Grey Wolf was a great Shaman (Medicine man) and new by what power his son, the Coyote, was held a prisoner; so, after performing the necessary ceremony, the Coyote was liberated. The Grey Wolf then suggested that they both depart as it was the object of the Panther mother to cause their destruction but the Coyote would not hear to this. When Izapa (the Grey Wolf) and his son the (the Coyote) returned to the lodge of the Panther family, the latter were greatly surprised. Then the Panther mother suggested one more test of courage, which was that they should go to a "canon" in the mountains, where the Panther girls' uncle dwelt, and where there was a swing so large that the ends of the ropes were secured to the tops of either side of the canon walls. Arriving at the lodge of the Panther girls' uncle, they all partook of food and enjoyed themselves greatly. Then the Panther mother said to Izapa, the Grey Wolf, "Get into the swing and let us see how high you can go without becoming faint." "No," said Izapa, the Grey Wolf, "I fear I am too old to try the swing, but will let my son, the Coyote, try it." Then the Coyote began to tremble with fear, but feeling ashamed of his emotion in the presence

of the Panthers, and particularly the girls he loved so intensely, he went into the swing. As the movement began to make the air whistle past his ears, ruffling his fur, and causing him to become dizzy at the great height to which he was carried: he called to Izapa, his father, to allow him to get off. The Panther girls were amused, and immediately sprang upon the seat and started the swing, which went so high as to become almost invisible to the little party in the canon, thus putting the Coyote to shame that his courage should be exceeded by the two Panther girls.

Then the party returned to the Panther mother's lodge, where she gave the Coyote his choice of the girls, when the Coyote immediately selected the younger and departed to his home.

The Coyote was away from home, hunting for food for his wife, who had not been well for a long time. Upon his return he found two babes in his lodge, when the wife said, "Go to the mountain near my old home, where you will find a spring of pure water; bring some of it so that we may wash the children whereby they may become strong and healthy as my people are." The Coyote set out, but remained away so long that by the time he returned to his home he discovered that his wife had gone away, taking one of the twins with her. The Coyote being a man, could not give the child the attention necessary for it to become a cleanly, healthy youth, and the consequence is that the Shoshoni, whose father the child became, are always dirty and have a hard time of obtaining proper subsistence. The wife, who took away the other twin, gave great care to *her* child, and that is the reason why the Andavits [all Indians except Shoshoni] are always well dressed and prosperous.

W. J. HOFFMAN, M. D.

[Reprint from the Report of the Antiquarian and Natural History Society, Ramsey, Isle of Mann.]

THE PENTATEUCH.—THE FRAGMENTARY THEORY.—Prof. Henry W. Greene reviews the theory of Kuenen's in the "Presbyterian Review," January number. The fragments which, according to the critics constitute the base of the Pentateuch, are four. They are lettered as follows: two Elohist, P. and E.; a Jahvist, J., and a Deuteronomist, D. P. is the document about which there is the most agreement, but Kuenen thinks that this was "welded together," and now successive strata are distinguished, such as P.1, P.2, and P.3. The most perplexities are with the fragments J. and E., and in many cases the critics give up the attempt to separate them as hopeless. Prof. Greene says, this cutting and splicing might be exemplified without end. The Hexateuch becomes a jargon of discordant and conflicting traditions. Conflict is assumed where there is none. It is claimed that the Jahristic document was composed in the North Israelite kingdom at the beginning of the eighth century. The Elohist document in the same kingdom about B. C. 750. The several Sagas were probably of local origin. The fragments, Kuenen maintains, were subject to a redaction, after B. C. 621, sometimes the documents being harmonized and sometimes being modified. Prof. Greene calls this whole theory a drastic treatment. The same methods which rend the Hexateuch into fragments and destroy its credibility would accomplish the same result in any other case. It would be intolerable in application to any literary production of ancient or modern times. He closes with the following remarks: "Let us hope that the time is not far distant when Biblical studies will no longer be disfigured by such enormities; when a race of critics shall arise equal in learning, ingenuity

and patient toil, who shall have some reverence for what is sacred, some respect for historical testimony, and some regard for the dictates of common sense.

**SCHOOL OF ARCHÆOLOGY IN PALESTINE.**—We are glad to learn that an effort is on foot to establish a school in Palestine, of the same character as those established already in Greece, and to make it the center of exploration and the place for the especial study of oriental languages. Beirut is proposed as the place for the school, as there is already a college here and it is very central. Americans have been prominent in Palestine explorations. Dr. Edward Robinson and Dr. Eli Smith began the survey in 1838, and continued it up to 1852. In 1859 came the first edition of Dr. Wm. M. Thompson's work, *The "Land and the Book."* In 1864 the English Palestine Exploration Fund was established, and in 1870, the American Society was organized but did not continue for long. American scholarship following in the line of English and German, has succeeded in establishing a school at Athens. The Egyptian Exploration Society has been assisted by American funds. It seems suitable that Americans should take the lead in this school in Palestine. The Society of Biblical Archæology in England is very scholarly and has done very much for Biblical Literature. We have no such Society in this country, but this will be a good substitute for it. If it should be established, students from the Theological Seminaries might finish their course by term in this school. These suggestions have been given by Mr. Henry W. Hulbert in the *Presbyterian Review*, and they are very timely. "From the discovery of the Moabite stone until the very recent unearthing of "Pharaoh's house in Thaplanes" in the northeastern portion of the delta of the Nile, the world of Biblical scholarship has been gratified by a constant succession of valuable and startling discoveries; and the end is not yet. Any light that can be thrown upon the ancient Semitic world will illuminate the Bible.

---

#### BOOK REVIEWS.

*The Old Testament Student*, WILLIAM R. HARPER, PH. D. Editor: The American Publication Society of Hebrew, Chicago.

**BIBLICAL ARCHÆOLOGY.**—The following list of titles will show the articles on Biblical Archæology in a technical sense, which have been published in the *Old Testament Student* since 1882: The Siloam Inscription by H. B. Waterman, June '82. Jacob's Zodiac, by Prof. John C. C. Clark, Sept. '82. The Language of Primitive Man, by Justin A. Smith, D. D., March '83. The High Places, by Prof. A. P. Smith, April '83. The Origin of the Semitic Alphabet, by Prof. John C. C. Clark, June '83. The Urim and Thummim, by Rev. S. F. Hancock, March '84. The Cuneiform Account of the Deluge, by Prof. Paul Haupt, Ph. D., Nov. '83. Studies in Archæology and Comparative Religion, by Justin A. Smith, D. D., fourteen articles, running from April '84 to Feb. '86. Universality of Serpent Worship, by Prof. W. G. Moorehead, D. D., January '85. Astronomy in the Book of Job, by Prof. R. B. Foster, D. D., April '85. The Land of Uz, by Prof. F. Delitzsch, May '85. Egypt before B. C. 2000, by Prof. Howard Osgood, D. D., Jan. '86. Incarnations in Historical Religions, by Justin A. Smith, D. D., March '86. The Biblical Creation, by Prof. M. S. Terry, May '86. The Assyrian Canon and the Chronology of the Bible, by L. F. Badger, June '86.

*Andover Review*—Published monthly. Boston; Houghton, Mifflin & Co.

The Archæological Notes in the November number of the *Andover Re-*



view are especially good. They are furnished by John Phelps Taylor. Some of them are drawn from the AMERICAN ANTIQUARIAN, some of them from the *American Journal of Archaeology*, the *Journal of Royal Asiatic Society*, *Academy Revue Archeologique*, *Journal of the Palestine Exploration Fund*.

The February number contains an article entitled "The Cherokee Experiment," by Wm. Barrows, D. D., showing the sufferings and loss of life which followed the migration of that people, and drawing a lesson from it, as to the effects of similar treatment of the Indians in our day.

*The Origin and Varieties of the Semitic Alphabet, with specimens*, by JOHN C. C. CLARK, Professor of Greek in Shurtleff College; Chicago: The American Publication Society of Hebrew, Morgan Park, Ill, 1884.

This book was written principally as an historical study. Much of its substance was published in the *Bibliotheca Sacra*, in April, 1874, under the title *History of Alphabets*. The tables are selections from similar ones which the writer has made, embracing most of the known ancient and modern alphabets of the world.

*Die Kupferzeit in Europa und ihr Verhältniss zur Cultur der Indogermanen:* Von DR. MATTHAEUS MUCH. Wien, 1886, 8vo., pp. 187.

An interesting and reliable study by one of the best qualified judges in Europe, dealing with vexed problems in a masterly and unprejudiced manner; adding to the great and well earned reputation of the author. H. F. JR.

*The Conception of Love in some American Languages*, By DANIEL G. BRINTON, A. M., M. D. Read before the American Philosophical Society, Nov. 5, 1886. Philadelphia, McCalley & Staveley, 1886.

Three ideas may be attached to the word love; first, the passion, or desire to possess the loved object; second, attraction to, affection for, the object; third, the unconscious sense of unity with the object. Dr. Brinton has examined the Algonquin, Nahuatl, the Maya, the Qquichwa, and the Guanani, languages, to ascertain which of these senses or sentiments predominated. His conclusions are as follows: "The conception of love as revealed in the languages under discussion are expressed, first by inarticulate cries of emotion. (Cree, Maya, Qquichwa.) 2. Assertions of sameness or similarity, (Cree, Nahuatl, Tupi, Arawacks.) 3. Assertions of conjunction or union, (Cree, Cakchiquel, Qquichwa, Tupi) 4. Assertions of a wish, desire or longing, (Cree, Cakchiquel, Qquichwa, Tupi.)"

*The Determination of Rock-Forming Mineral.* By DR. EUGEN HUSSAK, Privat-Docent in University of Graz, with one hundred and three wood cuts. Authorized translation from the first German edition by Erastus G. Smith, Ph., D.

The translation of Dr. Hussak's work on *Rock-Forming Minerals* by Prof. E. G. Smith of Beloit College, is designed for the use of Colleges and Universities. There are different methods of determining the minerals as follows: the optical, the chemical, the mechanical, and the morphological. The optical method is by polarized light, as the minerals are some of them single refracting and others double refracting. The chemical method is by micro-chemical reactions, the analysis of the portion of the rock in hydro-chloric acid being the most efficient. Full directions are given for testing the minerals. The electromagnet is used in the mechanical separation; the solution of iodine of potassium and mercury assisting in the morphological test, the crystals, both the fully developed and imperfect are examined. The tables for determining minerals occupy about half of the book. The technicalities of mineralogy are given with great definiteness and accuracy, and the book will be sought for by mineralogists on that account.

THE  
*American Antiquarian.*

---

VOL. IX.

MAY, 1887.

No. 3.

*Part 4. Q.*  
THE SERPENT SYMBOL.

In a previous paper we have considered the Serpent Symbol especially in regard to its prevalence in the Mississippi Valley. We found that it was prominent in the traditions of this region, that the mounds and earth works embodied the tradition and the symbol, and that many Archæological relics contain the Serpent form.

We propose to take it up now in its more extensive and wide spread appearance and shall consider the specimens of the serpent symbol which are found in the various parts of the Continent.

The origin of the symbol is the especial point and the subject of inquiry will be whether it was derived from extraneous sources or was the result of a nature worship which had its growth upon this continent. The symbol appears among the civilized races as well as the uncivilized, but it is here very elaborate. There seems also to be a progress from the simple to the complicated, from the rude to the highly finished ornament. This would indicate that it had its growth, and development upon the continent. But there are, on the other hand, certain peculiarities about the symbol which would indicate that it was the embodiment of a world wide tradition, and that there was a common source to the symbol as found in this and in other continents. There are at least two sides to the subject and if we would arrive at intelligent conclusions, we must consider the arguments on both sides, and ignore or reject nothing which may be a hint in either direction.

We have said that there are grades of development in this serpent symbol in America, but it is worthy of notice that no connected line of growth has yet been traced, but merely different stages. This, then, is to be our method, taking the lower stages first

we are to study analogies as we advance and base our conjectures on the law of development. There is, to be sure, always an uncertainty attending this idea of development, especially development in separate localities, for the connecting links can seldom be traced and other factors may come in which would constitute the real source rather than those which we are able to present. The law of development might, indeed, account for the symbol but there are questions of migration and of an intruded culture which might seriously interfere.

It should be said, however, at the outset that the symbol may have sprung from several different sources as follows: 1st. From the totem system which was so prevalent among the native tribes. 2nd. The system of nature worship and the personification of nature powers. 3rd. From the traditionary lore which may have either been handed down from an aboriginal ancestry or transmitted in various lines from people upon other Continents. These three sources must be taken into the account as we follow up the subject. Still we shall consider the Serpent symbol in its location and shall follow geographical divisions in our treatment of it.

The symbol appears on the two sides of the American Continent. On the eastern coast it is very rude and primitive. On the western coast, or rather at the south-west, it is much more elaborate. It has been held that there was an analogy between the symbol as found in the Mississippi Valley and Great Britain, and it has been conjectured that there was an historic connection between the two. The symbol on the western coast has so far furnished very few analogies which could be traced up with any degree of certainty in either direction, though the tendency would be to go west and to find resemblances in the serpent symbol as it formerly existed on the Asiatic coast. There is, however, a connecting link between these two in the traditions and customs still prevalent among the tribes of the deep interior which would indicate that the symbol mainly had its origin on this continent, three great centers of development having existed in prehistoric times.

We proceed then, to consider the serpent symbol as it is found in America with special regard to its location. We shall first consider the symbol as found in the Mississippi Valley, next, as it is furnished to us by the tribes of the Great West; and lastly as it is seen among the complicated and elaborate works of the civilized races of Mexico and Central America. We have in this case a succession of stages which rise above one another in the line of culture; and a succession of steps in which the symbol seems to come up to a higher grade, though it is a question whether the law of development can account for all the phenomena presented.

I. The serpent symbol prevailed as we have already shown,

in the Mississippi Valley. The question is, did it spring from an original nature worship, or was it brought in by extraneous tradition.

1. Our first inquiry will be as to the origin of the symbol among the Mound Builders. Was it a universal symbol or did it appear mainly among some particular tribe or race. The extent of the symbol is worthy of notice. The symbol is said to prevail in the State of New York. It certainly does exist to a certain extent in Ohio and we shall leave it for our readers to say whether it does not exist in various States further west. The author has found the serpent in many of the effigies of Wisconsin. In one locality near Mayville, a natural ridge had been modified by art so as to resemble a huge serpent. The ridge is nearly a thousand feet long, fifty feet wide, and twenty feet high. The sides had been excavated so that it looked like a tortuous serpent with the head just resting upon the brow of the bluff. What is more the mound-builders had placed a large series of garden beds on the low land in the angle between the ridge or effigy and the bluff, as if the design was to make the serpent serve for protection to the garden plats.

Another place where the serpent effigy has been noticed, is at Green Lake. Here the serpent is found in two or three different shapes. In one place two serpents were found on the border of a very tortuous stream, the folds of the serpent and the bends of the streams seeming to correspond. See Fig. 1.

These serpents are composed in part of a natural ridge which has been modified by art and a ridge which was altogether artificial, the two blending together to bring out the semblance in a very striking manner. The ridge is very tortuous, and is severed by the stream. The two parts of the ridge thus divided were taken as serpent effigies, but were modified so that the serpents should seem to have their heads rest near the stream but their tails, which were altogether artificial run back, parallel with the stream. These are remarkable effigies, as they show that nature worship or animism, had much to do with serpent worship, and suggests one method in



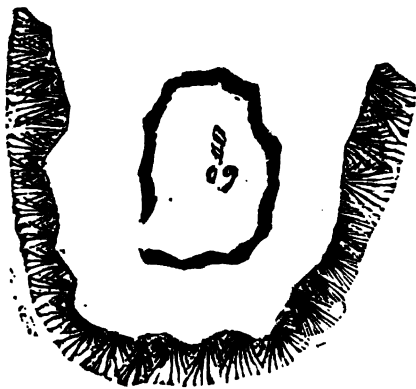
Fig. 1.—SERPENT EFFIGIES NEAR RIPON, WIS.

which it could have originated. It was evidently a freak of nature which suggested the symbol, as the stream and the broken ridge which formed its borders both resemble the serpent in their tortuosity, but the artificial part brings out this semblance very clearly, the folds of the serpent, and even the rattles being plainly seen in the earth-mold.

There are many effigies in the immediate vicinity, representing

panthers, buffaloes, wild-geese, squirrels, etc. One, that of a wild cat, having been placed on a natural rise of ground, in close proximity of the serpent effigies. This wild cat is a massive effigy and so covers the knoll as to be almost blended with the earth, but transforms the isolated hill into an immense animal, the hill itself is made to assume the attitude of the animal and to be possessed with life and activity, by the presence of the effigy upon summit.

Another specimen of the serpent symbol is found in the same locality. Fig. 2. The serpent here is not a mere symbol, but is made to serve a practical purpose as well. There are two enclosures on two separate hills, between which rises a mineral spring. The enclosures both have openings toward the spring. One of them contains the serpent symbol, as the wall is in the



shape of a serpent, and the opening or gateway is placed between the head of the serpent and the tail, as if there was a charm in the effigy itself which would give a double protection. The enclosure is a small one, only sixty feet by one hundred and twenty feet in diameter, but the serpent is plainly seen in the wall surrounding it. In measuring the wall it was found that the folds of the serpent were uniform

throughout the whole, the mean distance between each fold being exactly the same measure which is found to be very common in the breadth of the effigies, twenty-two feet, the outside being twenty-three feet, inside about twenty-one feet and the distance across fifteen feet and the opening for the gateway being about seventeen feet. A correspondence was noticed between the folds of this serpent effigy, and the tortuous line of the bluff on which the enclosure is placed.

The bluff is about thirty feet high, and the enclosure surrounds its summit, but overlooks the stream beneath the bluff. The effigy resembles in some respects, the famous serpent ring which was discovered on the walls of the gymnasium, so called, at Chichen Itza, but differs from it in that it is but a single serpent and yet the enclosure upon the corresponding bluff may have contained the companion to this, as the serpent effigies beside the stream below were companions to one another. It has been said that venomous serpents like the rattlesnake always go in pairs and it is noticeable that the symbols of the serpent frequently contain two, a male and female. Such is the case at least in the serpent ring just referred to. We have noticed also that the mounds in

Ohio present the symbol in its double capacity. The walls surrounding the enclosure being made in the shape of two massive serpents, either joined at the tail and with an opening between the heads, or joined at the heads with an opening between the tails. In this case, however, the effigy is a single serpent, and the opening is between the head and the tail.

2. These effigies found in the earth-works of Wisconsin are interesting as they show the manner in which the Mound Builders borrowed the serpent symbol from objects of nature. The serpent in this case was not a totem or clan symbol, for the clan emblem of the region was a different animal, but it was a fetich which was suggested by the shape of the ground. This was a common practice with the Mound Builders. There are many places where the objects of nature would suggest the serpent effigy, and where the symbol was embodied in artificial structures. It is possible that some of the serpent effigies may have been the embodiment of tradition which prevailed but those to which we have referred were only animistic or fetichistic and were not mythological. Mr. W. Pidgeon has referred to a serpent 1,000 feet long with a tortoise in his mouth as existing in Dakota, and has made out that many of the effigies were but embodiments of certain myths. Those which have been described by reliable authors are, however, not mythological, or at least they have no such shape as would suggest that they were the embodiment of a myth, but on the contrary are so conformed to the ground as to show that they were animistic or fetichistic and not mythological. Yet the two might possibly be combined.

Prof. J. E. Todd has described certain effigies as existing in Dakota under the title of "Boulder Mosaics." The effigies are formed out of standing stones resembling in this respect the lines of standing stones which exist at Avebury, England, and other places. The Dakotas have a tradition that they came from the far East. Some have maintained that they brought into this country the symbolism which formerly prevailed in Great Britain and that on this account the resemblances between the works at Portsmouth and those at Avebury are very significant. The works at Portsmouth, however, are mounds and ridges and not standing stones. The description given by Prof. Todd, is as follows:

"A typical example, and the first to come to the writer's knowledge, was found on the summit of Keya Kapop, or Turtle point, three miles north of Wessington springs in Jerauld county. The point is a high promontory-like hill, standing out on the western edge of the James River valley, above which it rises nearly 500 feet. It is the northern end of a high ridge of drift constituting a well washed interlobular portion of the principal moraine. A view of Turtle point, and a portion of the ridge from the north-west is shown in Plate I. Upon the highest portion of the point is a low wood mound built of earth, perhaps fifty feet in diameter

and three or four feet high. It does not differ materially from many that are found on the summit of bluffs along the James and Wisconsin. Its chief attraction is the gigantic figure of a turtle upon its southern slope, as is shown in Plate I. This figure is formed of boulders, four to six inches in diameter, quite closely and regularly set, so as to describe its outline. The head, legs and tail are extended. Its general appearance, position and structure are shown in Fig. 3."

"This work, interesting as it is, sinks into insignificance when compared with a similar work upon Paha Wakan, or Medicine hill, near Blunt, in Hughes county. This hill is also a high interlobular portion of the principal moraine, and presents the same general features as Turtle point, as will be seen in a sketch of it, from the east, in Fig. 6. It rises above the surrounding plain about 200 feet, and nearly 400 feet above the adjoining valley of Medicine creek. Its summit is flat and includes many acres. Granite and limestone boulders abound in profusion. Tepee rings, i. e., circles of boulders which were used in holding down the covering of the conical tents used by the Dakotas, are very abundant upon the summit. A few mounds of ordinary size, are scattered in no apparent order. Near the northwestern angle of the summit platform is the gigantic serpent represented in Fig. 4. Its length measured roughly along its central line, following the crooks, is 120 paces. The general form, with length, breadth and number and shape of crooks, are as faithfully represented, as a hasty sketch could give. The boulders comprising it are from six to twelve inches in length, and are laid much less closely than in the turtle. The direction of its northern half is N. 18° W. The presence of the mound at its side seems to be accidental. The head is more carefully represented in Fig. 5, where an attempt is made to express the shape, size and position, of the boulders composing it. The eyes are much more expressive, than it would at first seem possible; to make them with such material. They have literally "a stony stare." They are formed of two oblong boulders nearly a foot in length. The angular head and heavy body, suggest the rattlesnake as the designer's model, but there is no clear representation of the rattles. Perhaps that was beyond the artist's inventive power. At C, in Fig. 4, the boulders have evidently been displaced, probably by water or frost, action, as that portion is on an inclined surface.

This gigantic serpent was in good condition when seen in 1883. Mr. Todd further says: "Though this completes the list of "boulder mosaics," it may not be out of place to speak of a somewhat related work noted by the writer, in 1881, in Brown County a few miles northwest of Westport. On the right bank of Elm River were two quite conspicuous mounds, 270 paces apart, upon two symmetrical knolls. Beginning at the top of the northwestern one, a line of bones extended over the center of the other, and

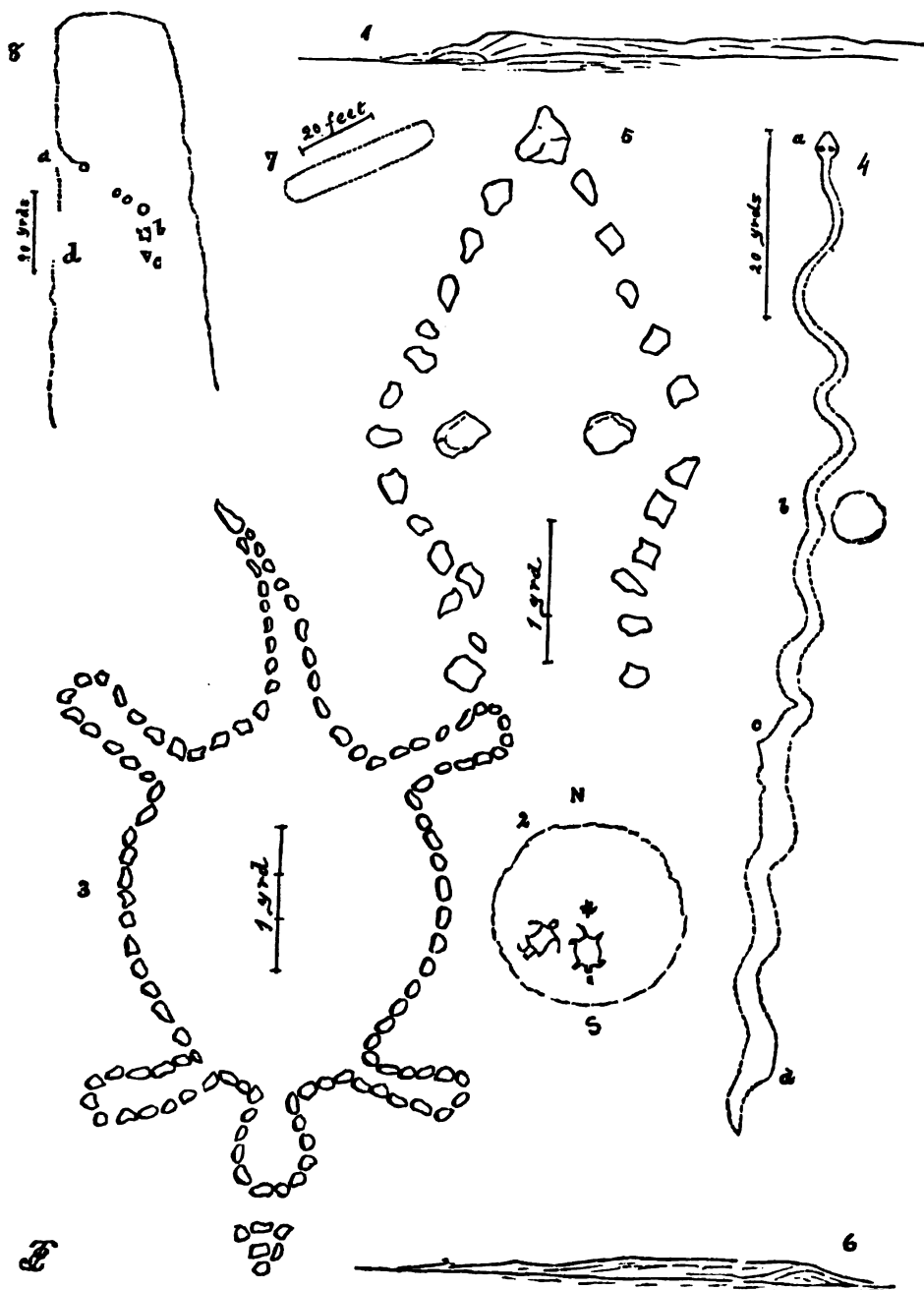


Plate I.—STANDING STONES IN DAKOTA.



146 paces beyond, where it ended in a small pile of boulders. The bones were mostly the leg bones of buffalo, set up in the ground like stakes. That was before the land was in market."

3. We have given this description because it illustrates how the natives connected their superstition with the serpent symbol. We hardly think that any historical tradition or any formal or inherited serpent worship was here symbolized though the proximity of the serpent to the turtle does suggest a myth which was common. We ascribe the effigy to that peculiar form of superstition which was ready to seize upon any object in nature which might resemble an animal and then to make a divinity out of it, the idea being that the Great Serpent or the Great Turtle Spirit dwelt in the hill, and was to be worshiped as a divinity which haunted the place. The same superstition prevailed in Ohio and embodied itself in the Great Serpent there. A description of the Great Serpent Mound in Adams County has been given but as a new exploration has been made by W. H. Holmes, and a new interpretation offered, we here furnish a description quoted from Mr. Holmes' account. "The valley of Brush Creek is bordered by an extremely rugged country abounding in high hills which reach an elevation of 600 feet above the bed of the Creek." The Great Serpent is upon one of these hills which extends out as a narrow spur, crescent shaped, into the gulch which borders the stream. "This spur narrows up and terminates in an abrupt promontory, around the base of which a small branch from the gulch turns making the end of the promontory in the midst of the valley isolated and distinct. Along the rounded grassy crest of this ridge we can detect the obscure serpentine coils of the earth work, and descending a little to the left, and almost to the brink of the cliff, we reach the tail of the serpent. Beginning with a small pit at the terminal point, we follow the unfolding coil for two full turns and then advance along the body to its highest point upon the ridge. The curves are strong and even, and the body increases gradually in height and width as we advance. Upon the crest of the ridge we find ourselves at the beginning of three great double folds. Following these, we descend into a slight sag in the ridge caused by the encroachment of opposing drainage, and ascend again slightly to a point where the body straightens out along the ridge. Beyond this we reach the curious enlargement with its triangular and oval enclosures. Here the body embankment is divided into two parts, which respectively pass to the right and left of the enclosures. At the sides they descend slightly upon the slopes of the ridge, and at the widest part of the oval are somewhat obscure on account either of original conformation or of subsequent erosion. Beyond these breaks they continue, closing entirely around the oval embankment within. From the point of junction the body continues for a short distance, perhaps forty feet, and then terminates in a rounded and slightly



Plate II.—SERPENT EFFIGY, HOLMES' SURVEY.

widened point. This terminal elevation is entirely omitted by Squier and Davis, but is noticed by more recent writers; and on account of the supposed presence of obscure auxiliary ridges of earth extending down the slopes to the right and left, it is likened

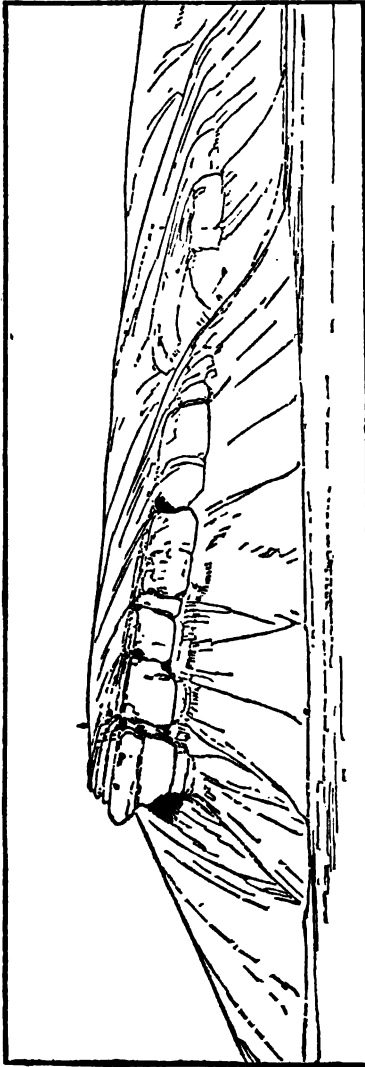


FIG. —ROCK IN SHAPE OF SERPENT.

to the body of a frog by Mr. McLean. These auxiliary ridges, and the minor appended features recognized by Squier and Davis and by some recent visitors, are too obscure to be identified with absolute certainty, and I consider it unsafe to introduce them into my illustration; but the entire body of the serpent, and the peculiar features of the enlarged portion, are all distinctly traceable as shown approximately in the accompanying map, and leave no doubt in the mind as to their artificial character."

"I wish now to call attention to a few points bearing upon the origin and significance of the work and its possible relation to the topography of the site. The use of the serpent by our aboriginal races has been well nigh universal, so that we need not hesitate to class this specimen with other products of their religion, and we should naturally expect to find the counterpart of each feature in other representations, ancient and modern. Most of the attempts to throw light upon the more extraordinary features of the work have been made through the medium of oriental philosophy; but it is manifestly wrong to go thus out of our way to seek a symbolism for the oval enclosure as do Squier and Davis, who liken it to the symbolic egg of old world philosophy; nor

need we make a serious effort to combat the idea that the terminal portion is a frog as suggested by Mr. McLean. It would not seem unreasonable that the former feature should be simply the eye of the effigy; but we have another explanation more in

accord, perhaps, with the analogies of native ceremonial art. The heart, which represents the life, is made a prominent feature in all superstitious, delineations of living creatures as shown by a multitude of examples. When we restore the neck and head of the reptile, omitted by Squier and Davis and misinterpreted by others, the strange oval takes the position of the heart and in all probability marks the site of the ceremonies that must have been connected with this work. This leads to a consideration of the proper identification of the head of the effigy, and the relations of the natural to the artificial features of the site. From the point of view of my second illustration we have a comprehensive view of the serpent ridge. Having the idea of a great serpent in the mind, one is at once struck with the remarkable contour of the bluff, and especially of the exposure of rock which readily assumes the appearance of a colossal reptile lifting its front from the bed of the stream. The head is the point of rock, the dark lip-like edge is the muzzle, the light-colored under side is the white neck, the caves are the eyes, and the projecting masses to the right are the protruding coils of the body. The varying effects of light must greatly increase the vividness of the impressions, and nothing could be more natural than that the Sylvan prophet, secluding himself in this retired part of the wilderness, should recognize this likeness and should at once regard the promontory as a great manito. His people would be led to regard it as such and the celebration of feasts upon the point would readily follow. With a mound-building people, this would result in the erection of suitable enclosures and in the elaboration of the reptile, that it might be the more real. The natural and artificial features must all have related to one and the same conception. The point of naked rock was probably at first and always recognized as the head of both the natural and the modified body. It was to the Indian the real head of the great serpent manito."

3. In reference to this interpretation we would quote from Mr. E. G. Squier's work on "Serpent Symbol." He says: "We may expect to find the strongest signs of affinity in religious beliefs, and conceptions, in traditions, and in such customs as are arbitrary, and not the spontaneous or the natural growth of a peculiar condition of things. Upon the plains of the West, nature's grand pasture ground, we find the roving hunter, chasing the buffalo, from one extremity of its vast range to the other, and in his habits and equipments exhibiting an entire harmony with his condition and circumstances. His necessities require fleetness, and all accommodating nature has bestowed upon him a form of proper muscular development, and capable of the requisite endurance. The skins of the buffalo he has slain, form the covering of his lodge, his bed, and his robe; its flesh sustains him, and from its hoofs, horns, and bones, he fashions his implements of the chase, his ornaments and domestic utensils. Its white skull, bleaching

on the open plain, has become his "medicine;" shadowy buffaloes fill his wild legends; and the black bull is an emblem of evil and malignant portent, while the white cow is a token of auspicious significance." . . . . . "In the gloom of the "medicine lodge," are taught the mysteries of the Wabeno, and the potency of the mnemonic signs by which the supreme powers may be successfully invoked, and their traditional songs perpetuated." . . .

"As the result of a pretty extended investigation of the subject, it may be affirmed that the predominant religious conceptions of America have found their expression in some modification of what is usually denominated "Sun Worship," (nature worship) but which might, with more propriety be defined to be an adoration of the Powers of Nature. This seems to have been, throughout the globe, the earliest form of human superstition, dating back far beyond the historical, and even beyond the traditionary period of man's existence. It seems to lie at the basis of all the primitive mythological systems with which we are acquainted, and may still be found under a complications of later engraftments and refinements, derivative and otherwise in all the religions of Asia. It may be traced, in America, from its simplest or least clearly defined form, among the roving hunters and squalid Esquimaux of the North, through every intermediate stage of development, to the imposing systems of Mexico and Peru, where it took a form nearly corresponding with that which it at one time sustained on the banks of the Ganges, and on the plains of Assyria." . . . . "In the absence of a written language, or of forms of expression capable of conveying abstract ideas, we can readily comprehend the necessity, among a primitive people, of a symbolic system. That symbolism in a great degree resulted from this necessity, is very obvious; and that, associated with man's primitive religious systems, it was afterwards continued, when in the advanced stage of the human mind the previous necessity no longer existed, is equally undoubted. It thus came to constitute a kind of sacred language, and became invested with an esoteric significance, understood only by the few."

This view of Mr. E. G. Squier is worthy of notice as it shows how the serpent symbol may have arisen in America. Still, the interpretation of the effigy and the generalization of Mr. Squier do not necessarily preclude the idea which we have advanced elsewhere that there may have been an historic connection between some of the serpent symbols in Ohio and those in other countries. Mr. Squier himself has advanced this idea and in the same work from which we have quoted, refers to the analogy between the works at Portsmouth and those at Avesbury in Great Britain.

II. The prevalence of the serpent worship among the tribes of the far West will next engage our attention. We have here very few archæological tokens but we have the traditions of the

people and the customs which perpetuate the system. It is hardly known from what source these strange customs came but they seem to be sacredly observed. The Moquis have the most remarkable forms of serpent worship. They are not alone for there are other tribes which have modified forms of the same superstition and these are taken as the best representatives.

The description of the Moqui snake dance, is interesting on account of the symbolism, which is manifest in it. There were two costumes, that of the Antelope gens, under whose auspices the dance was performed, and that of the Snake order, the performer. The legend of this dance is the legend of the first arrival of the Moquis, at their present habitat. The Antelope gens, were the first to arrive, and were guided to their present location by the snake woman. The snake order was instituted to commemorate this event, each performer, both the antelopes and the snakes, wore two or more strings of shell beads around his neck, and suspended from them a brilliant, haliotis shell. The breasts and upper arms, were decorated in pink clay, with the conventional snake design, in its zigzag line. Suspended from the back of the sash, hung a coyote skin, with a tail which just reached the ground. At the knee they wore the regular garter, and just below the knee a rattle consisting of a tortoise shell, with attached antelope hoofs. The dance itself was very weird. Each dancer held a live snake in his mouth, while a companion followed with a feather wand in his hand, distracting the attention of the snake. "The low chant of the antelopes, the dismal though rythmical clack of the rattles, the peculiar motions of the dancers, the breathless attention of the spectators, all gave this part of the performance a weird character." At the close of the dance, the snakes were dropped in a circle and then seized and carried out, and down to the foot of the Mesa, and there released. The object of this part of the ceremony, was that they might find a raingod, whose form is that of a gigantic serpent. The snakes which were released at the four quarters of the earth, and were supposed to act as messengers to the raingod. The part of the heavens from which rain came indicated the region where the god was at the time, that he received the message. One part of the performance was to draw in the form of a circle with sacred meal and two diameters in the form of a cross, representing the cardinal points, and another oblique line to represent the zenith and nadir.

The underlying ideas which have given rise to this dance are unknown, but in the minds of the Moqui Indians, it is simply an invocation, a ceremony having for its sole purpose, the procuring of rain, yet the fact that there is an esoteric idea connected with it, seems to point to another and a deeper signification. The rites connected with serpent worship, have always been secret, and, while it has been so widely distributed in one form or another, that there is hardly a nation or tribe, which does not carry traces

of it in its history, but little is known about its details or origin. The worship of the serpent has been associated with the strangest conceptions of the barbarous, and semi-civilized minds, as for example the principles of reproduction, among the Hindoos, and with the idea of divine wisdom among the Egyptians. There is some evidence that these ideas were held as a part of the esoteric system, which has been so secret, and which has not yet been penetrated, so as to be explained. The singular part of the symbol, and the myth is that there is so much of the primitive nature worship, which seems to be indigenous to the soil and at the same time so much similarity to the sacred mysteries, which prevailed in historic countries. It would seem from this that a double system existed, one part of it,—that part which is best known,—being conformed to the superstitious notions of the common people among which it prevailed, but a part of it, and that the most, elaborate and complicated, being still held, by the priests or “medicine men,” in great secrecy, as an *inherited legacy* which can possibly be traced to historic countries. It is well known that the Eleusinian mysteries contain much that was derived from a primitive nature worship, and it is supposed that the druidical rites were derived from the same source. We do not know that the rites or symbols, which we have described as so common in various parts of America, can be traced to either the Druids or the Hindoos, but there are points of resemblance, which suggest an historic origin. The progress of thought, and the growth of religion may however account for these, and the parallel development may be the important subject to study rather than the historic connection, yet we cannot deny the fact, that the civilization of America, was influenced by the symbolism of other countries. Until we have accounted for these remarkable resemblances, by the theory just proposed, denial can be practiced in one direction as well as in another, at the same time one hypothesis is as good as another.

“That the serpent was intimately connected with Sabæism, cannot be doubted, for the prevailing emblem of the solar god was the serpent; and wherever the sabæan idolatry was the religion, the serpent was the sacred symbol.”

But the universality of serpent worship, and the strong traces which it has left in astronomical mythology, seem to attest an origin, coeval with idolatry itself.\* “It entered into the mythology of every nation, it consecrated almost every temple, it symbolized almost every deity, was imagined in the heavens, stamped on the earth, and ruled in the realms of everlasting sorrow.”† “When the Egyptians would represent the universe, they delineated a serpent, bespeckled with variegated scales, devouring the emblem of the sun. The dragon was also used as a symbol of the

\*See Science article on the Snake Dance.

†See Deane's Serpent Worship, page 39.

same form of worship. The three symbols, the sun, the phallus, and the serpent are sometimes combined. All of these facts go to show that there was at least a common conception at the basis of the symbol, even if a common historical origin cannot be discovered. It would seem from the snake dance that nature worship was the source of the symbol. The same idea is conveyed by the traditions and myths prevalent among the wild tribes. The Shoshoni philosopher believes that a monster serpent god supports the sky with his back. But the sky itself is ice, as it bears the color of ice, which the serpent abrades with his scales and causes the ice dust to fall upon the earth. In the winter time it falls as snow but in the summer time it melts and falls as rain. The form of this serpent is seen in the rainbow of colors, it is then the serpent of the storm."

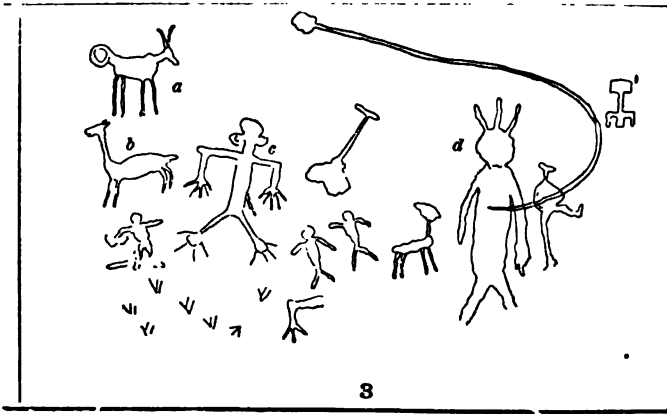


Fig.4.—SER EN IN ROCK INSCRIPTIONS.

This conception of the serpent is, however, not confined to the Shoshonis, it is a common belief that the lightning is a serpent. This symbol is frequently used to signify the rain god or the storm god. The gesture sign for rain is made by holding the hands before the shoulders with the fingers pendant as if to represent the drops; but for lightning the forefinger points upward and is brought down with great rapidity with a sinuous undulating motion. This sign was common among the Apaches, Shoshonis, and other Indians of the West. There are, also, pictures which contain the serpent as a symbol for lightning much more distinctly than this gesture language. Pictures were discovered by Mr. N. H. Jackson on the decorated walls of an estufa in the Pueblo de Jemez which symbolized lightning; one of them as an arrow shooting from the sky, but the other as a crooked feather headed serpent, both of them shooting from two semi-circles



which were symbolical of the sky or cloud. The inscribed rocks of Colorado contain pictures of the serpent associated with human and animal figures, though it is unknown whether these were designed to symbolize nature powers, or whether they were the representatives of the totems of the tribes, or were the records of the people, or mere figures which were drawn by the fancy of the people.\* [See Fig. 5.] The pictographs discovered by

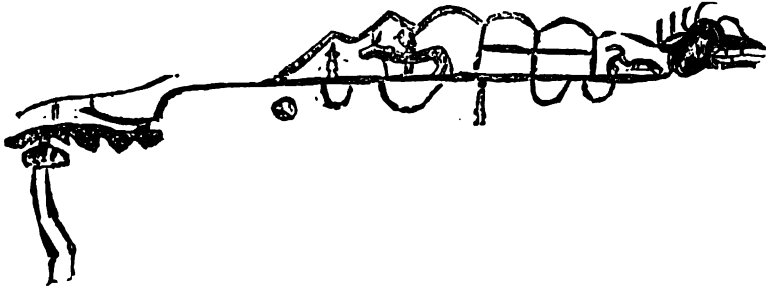


Fig. 5.—SERPENT ON AN INSCRIBED ROCK IN COLORADO.

Lieut. Whipple of the Pacific Railroad survey on the Rocky Dell Creek in the Stake Plains, [See Fig. 5.] contain a figure of a non-descript animal. It was interpreted by the Pueblo Indians as the great water snake created by Montezuma to give rain and preserve the lives of those who should pray to him. They described the snake as being as large around as a man's body and of exceeding great length, slowly gliding upon the water. They say they smoke and pray to the sun. The moon is the younger sister of the sun; the stars are their children; all are worshiped. Besides these is the great snake to whom they are to look for life. Rattlesnakes, frogs, and all animals living near the water are sacred among the Pueblos because of their association with the water which is regarded as a great blessing. Apaches, however, do not regard these animals as sacred but they pay particular veneration to bears.† The Zunis have the serpent as a common symbol.

III. We now turn to the serpent symbol as found in Mexico and Central America. Serpent worship seemed to prevail throughout this entire region and was common both among the Nahuatl and Maya races. It is well known that there were two great centres of population in prehistoric times, and two parallel lines of history and civilization, namely, in Mexico and Central America. It is remarkable, however, that as we examine the monuments in both sections, we find the serpent symbol very prominent. It is supposed that the Toltecs were the more ancient people and

\*See N. H. Holmes' account of Rock Inscriptions, Hayden's Survey, 1876, p. 402, Pl. XLIII, Nos. 2 and 3.

†See Report upon the Indian Tribes by Lieut. Whipple, p. 38.

that the Maya history and civilization preceded that of the Nahuas, but in both, the serpent symbol appeared and, so far as we can ascertain, had the same general significance. We do not, to be sure, find the serpent as conspicuous in the architecture of the northern city of Mexico as in the more ancient cities of the South, such as Uxmal, Palenque, Chichen Itza, but we find it very promi-



Fig. 6.—HUMAN FIGURE; ENVELOPED WITH THE SERPENT SYMBOL.

nent in the relics of art such as the calendar stones, the vases, and vessels of pottery and other sculptured stone relics. The manuscripts or codices which have been transmitted through the hands of the Nahuas scribes have the serpent symbol in great profusion. But on the other hand the bas-relief stucco ornaments and hieroglyphic tablets of the southern kingdom have the symbol very prominently represented. It would seem from this that the serpent worship was very prominent in both races and was transmitted from one race to the other, or was drawn either from primitive customs and superstitions and developed in parallel lines.

[I.] We propose to describe the various specimens of ancient art, which contain the serpent symbol, and shall give a number of cuts to illustrate the point. There are many relics in Mexico which contain the serpent symbol. Dr. Rau says of these relics: "the particular attention paid to snakes by the inhabitants of Anahuac is exemplified in the collection by a number of mouldings and relics in clay representing those reptiles in various atti-

tudes. Several specimens show a snake coiled on the back of a turtle and in the act of biting its head. In some of these representations the lower part of the neck of the turtle exhibits a human face. This curious group is quite typical and probably refers to some tradition or to a religious conception of the Aztecs. A coiled snake with uplifted head is likewise frequently met among the Mexican terra-cottas, and a number of productions of their character can be seen in the National Museum. He says one of the most elaborate Mexican figures of the collection represents a man seated with the hands resting on the knees and bearing on his back another human figure is so placed that its head surmounts that of the first, while its hands press against the forehead and its feet rest on the shoulders of the lower figure. The most conspicuous feature consists in two serpents which, descending from the head-dress of the upper figure, encompass the group on both sides and rest their heads beneath the feet of the upper figure. [See Fig. 6]

A still more admirable specimen of Mexican pottery, and as far



Fig. 7.—VASE WITH SERPENT ORNAMENT.

as the general outline is concerned, might readily be taken for a vessel of Etruscan or Greek origin. The peculiar ornamentation, however, stamps it at once as a Mexican product of art. The vessel may be compared to a pitcher with two handles standing opposite to each other, and with two mouths projecting between them. Each handle is formed by two snakes crossing their tails and resting their heads on the rim, and the flat base of the vessel is moulded in the shape of a coiled serpent. Another beautiful Mexican vase [See Fig. 7.] of somewhat globular shape is remarkable for its elaborate raised ornamentation which consists of four entwined snakes and four masks placed at

equal distances from each other. The vessel stands on three feet, presenting beautifully executed eagle's heads.

There are many other specimens of art adornments besides these. Bancroft speaks of the specimens of art at Tezcuco, the ancient rival of Mexico, in the northwest part of the town. He says: "Mayer found a shapeless heap of bricks, adobes and pottery. In the top were several large basaltic slabs. The rectangular stone basin with sculptured sides shown in the cut, was found in connection with this heap and preserved in the Penasco collection in Mexico." [See Fig. 8.]

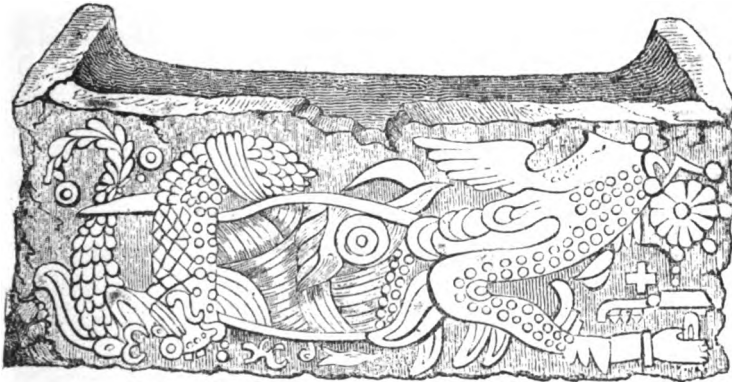


Fig. 8.—WATER TROUGH WITH SERPENT ORNAMENT.

This has been described as representing a conflict between a serpent and a bird, and attention has been called to the cross as a symbol of nature worship. The serpent was a symbol of the lightning, the bird of the winds, and the cross of the point of the compass, and it is possible that this was what was intended.\*

Bradford states that lying directly under the gate-way an idol has been preserved nearly perfect and representing a rattlesnake painted in bright colors, and Dupaix mentions the following specimens. At Xochicalco, on the western shore of the lake is a coiled serpent in red porphyry 1½ feet in diameter, and 9 feet long if uncoiled. A serpent cup, or a cup in the shape of a coiled serpent with the head projecting for a handle, was found at Santa Catolina; the material of black porous volcanic stone, and a rattle-snake, 8½ feet long and 8 inches in diameter near Atlixco sculptured in high relief on the flat surface of a hard brown stone. In the cloisters behind the Dominican Convent is a noble specimen of the great idol, almost perfect and of fine workmanship. This monstrous divinity is represented as swallowing a human victim which is seen crushed in its horrid jaws." "The corner stone of the Lottery Office is described as the head of the serpent idol, not less than 70 feet long when entire." "A house on the

\*See Prehistoric World, p. 153.

street corner on the south-east side of the Plaza rested on an altar of black bay salt, ornamented with the tail and claws of a reptile." Mayer dug up in the court yard of the University two feathered serpents of which he gives cuts as well as several other relics found within the city limits. Senior Gondra gives plates from nine Mexican musical instruments, one of which is of very peculiar construction; the top, shaped like a coiled serpent, is of burnt clay resting on the image of a tortoise carved from wood, and that on a base of tortoise shell. These various specimens of art in Mexico illustrate one point. The myth of the serpent and the tortoise was evidently familiar to the Nahua races.

Besides these, may be mentioned the Aztec calendar stone, which always had a serpent around its edge, and generally a face representing the sun in the center, and various figures and hieroglyphics the division of time. There are many specimens of calendars in Mexico, the chief of which is the one which has been so often described, situated at present in the National Museum

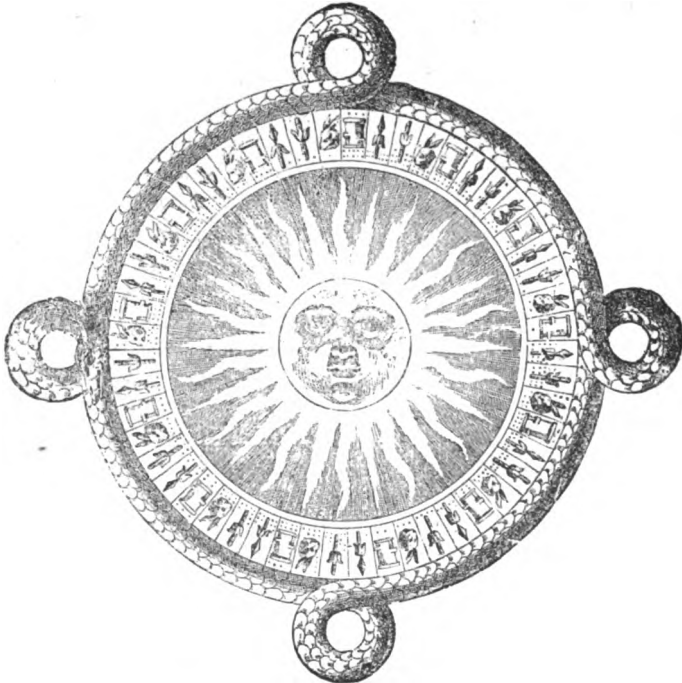


Fig. 9.—AZTEC CALENDAR STONE.

in Mexico. A simpler calendar than this has been found and described. We furnish a cut Fig. 9, taken from Biart's "History of the Aztecs," and kindly loaned to us by A. C. McClurg & Co., The author says "the Aztec cycle was represented by a circle with a picture of the sun in the center; around this circle from

right to left there were representations of the four symbolic signs of the year. The first year was called *Tochtli*, the rabbit; the second, *Acatl*, the reed; the third *Tecpatl*, the flint; the fourth, *Calli*, the house. It will be noticed that the folds of the serpent which surrounds the cycle, divide it into four periods of thirteen years, and that these rings at the same time mark the cardinal points. This is a very remarkable figure. It shows how the serpent symbolized the cycle of time. It seems to have come a conventional use, and to have been taken out from the range of the nature powers. Yet the serpent, and the sun are almost always associated together in the calendars; as if the powers of nature were to be symbolized by them as well as the divisions of time.

This brings up the suggestion that much of mythology was embodied in the calendar stone. The cosmic serpent has been extensively symbolized in various parts of the world, and the question is whether the same conception and myth were embodied in these calendars.

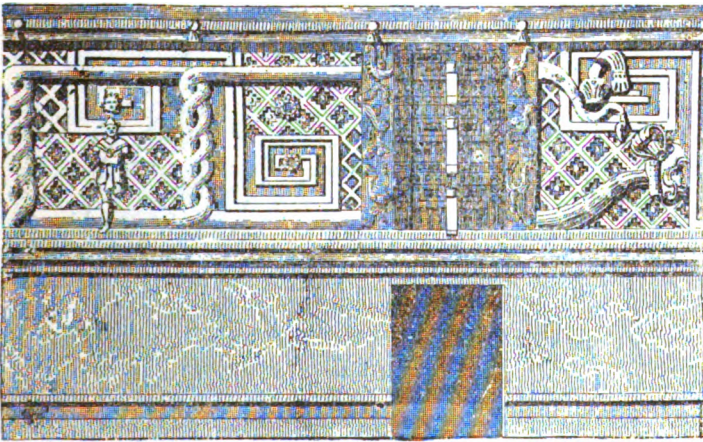


Fig. 10.—SERPENT ORNAMENT ON FACADE AT PALENQUE.

[II.] We next take up the line of Architecture. One peculiarity of the serpent symbol is noticeable here. The serpent is represented in relief as a prominent ornament. This is the case in the facade of the so-called "House of the Nuns," at Uxmal. [See Fig. 10.] We quote from Bancroft who says: "Two serpents each with a monstrous head, between the open jaws of which a human face appears, and the tail of a rattle-snake placed near and above the head of either end of the building, almost entirely surround the front above the lower cornice, dividing the front surface, by folds and interlacing of their bodies, into square panels, that is, it seems to have been the aim of the builders to form these panels by the folds of these two mighty serpents, and the work



is so described by all visitors; but it appears from an examination of the folds, that the serpent whose head and tail are shown on the right only encloses really the first panel, and that each other panel is surrounded by the endless body of a serpent without head or tail. The scales or feathers on the serpent's body are somewhat more clearly defined than indicated in the engraving, as is proved by Charnay's photograph." . . . "They are put together by small blocks of stone exquisitely worked and arranged with the nicest skill and precision. The heads of the serpents are adorned with pluming feathers and tassels." At Chichen-Itza there is a pyramid which has a stairway whose balustrade is formed by a pair of immense serpents; its base is 197 by 202 ft., its height 75 ft., and its summit platform 61 by 64 ft. A stairway leads up the northern slope 44 ft. wide containing 90 steps, having solid balustrades which terminate at the bottom in two immense serpent's heads 10 ft. long, with open mouths and protruding tongues. Near this pyramid is the building which is called by Stevens the Gymnasium. It consists of two parallel



Fig. 11.—SERPENT RING AT CHICHEN ITZA.

walls 30 by 274 ft., 26 ft. high and 120 ft. apart. The inner walls facing each other present a plain, undecorated surface; but in the center of each, about 20 ft. from the ground, in a stone ring 4 ft. in diameter and 13 in. thick with a hole 19 in. in diameter through the center; surrounded by two sculptured serpents as in the following cut. [See Fig. 11.] This structure is very similar to the one at Uxmal, which was covered with sculptured decorations, including two entwined serpents, while from

the center of each of the façades projected a stone ring fixed in the wall by means of a tenon.

It may be a mere coincidence yet it is worthy of notice that serpents are arranged in pairs in many places. The calendar stone of Mexico contains two serpents which form the outer circle of the stone and which surround the complicated symbols in the center of which is the face, supposed to be the face of the sun. These serpents are regarded by some as the symbol of the great cycle of time and the ornaments or symbols enclosed by them are supposed to represent the years in the cycle, the days of the year, the number of days in the month, and the week days. There are, however, many places where the serpent is single, and again in other places it is four fold, so that we cannot press this point too closely. And yet in the architecture the double serpent is noticeable.

Another peculiarity of the architecture of this region is that the serpent symbol is frequently found connected with temples and religious edifices. Bancroft says in reference to the Gymnasium and the building at Uxmal where the serpent ring was found, "it is easy to imagine that the grand promenade between the northern and southern palaces or temples was along a line between these walls, and that these sculptured fronts and rings were important in connection with religious rites and processions of priests."

There was in Mexico also a famous temple dedicated to the god of war. Of this Acosta says: "it had a very great circuite, and within a faire court. It was built of great stones, and in fashion of snakes tied one to another." Solace describes the temple: "The top of the truncated pyramid on which the idols of Huitzilopochtli, the god of war, and Tlaloc, the god of rain, were placed, and was 40 ft. square, and reached by a stair way of 120 steps. On this was the chapel wherein, behind curtains, sat Huitzilopochtli on a throne supported by a blue globe. From this, supposed to represent the heavens, projected four staves with serpent's heads by which the priests carried the god when he was brought before the public. The image bore on its head a bird of wrought plumes whose head and beak were of burnished gold. Its right hand leaned upon a staff. His body was girt with a large golden snake and adorned with various lesser figures of animals made of gold and precious stones, which ornaments and insigne have each their peculiar meaning. One of the names of Quetzalcoatl, the chief god of the Mexicans, was the feathered snake. The entrance to his round temple in Mexico represented the jaws of a tremendous snake. Quetzalcoatl disappeared in Goatzacoalco, the snake corner; and a ship of snakes brought him to Tlapalla. The driving away of Quetzalcoatl by Tezcatlipoca, his enemy, was symbolized by the figure of the god cutting up a snake. This may have been intended to rep-



resent the conflict between the sun god, or the god of light, and the night god, or the god of darkness. Or the other snake may be the symbol of moisture and the god of death and drouth, fights the snake, as the symbol of the plant life. Dr. Brinton and Mr. Edward Tylor maintain that Quetzalcoatl was the sun, and that the history of the god was designed only as personifications of the sun and its various qualities. Bancroft seems to think that both of the divinities of the Aztecs, Quetzalcoatl the sun god, and the god of war, had a nature basis, and as Mars was regarded as the god of Spring, so the Aztec god of war was associated with the rain god, and was the source of the yearly life of the plant world. If the snake signifies in one place time, in another world, in one other instance water or rain, the yearly rejuvenation of germs and blossoms, the eternal circle of nature, domination, soothsaying, it is quite proper that all these qualities are found united in one god. Just as the snake changes its skin every year, so does Huitzilopochtli whose mother Flora, is a snake goddess, the idea of the yearly renewal of nature being also connected with that of time forever young, and the Aztecs therefore encircle their cycle with the snake as the emblem of time.

[III.] We turn now to the hieroglyphics which contain the serpent symbol.

The serpent in Mexico was used to symbolize three things: 1st. The cycle of time. 2nd. The Lightning as one of nature's powers. 3rd. The attribute of a divinity and the name of an ancestry.

In its first use it often appeared in the codices. In some cases four serpents were coiled so as to form the sides of a square. Four squares were brought together, possibly to represent the four quarters of the globe, or four great divisions of time. In the midst of the figure was the face of the sun; the eye, protruding tongue and fiery rays emanating from the face, all of them being significant of the nature powers. Dr. Thomas thinks that the serpents represented the four divisions and counts 13 rings on the body of each serpent, making 52 years out of the combined figure. The position of the four serpents might, however, be designed to represent the four quarters of the sky, and the whole figure might be considered a constellation, the sun being the central object, the two purposes being combined, namely, to symbolize the divisions of the celestial regions and to enumerate the years of the calendar. Astronomy and chronology were connected in the oriental countries and we may suppose that they were in this country. The calendar stone in Mexico has been the subject of much study. [See Fig. 12.] Dr. Philip Valentini regards it as a symbol of chronology. The four figures in the center surrounding the face signifies the four periods of time. The animal heads in the second circle give the names of the months, twenty in number. The dots in the next cycle and the grain of corn in the

fourth circle, together make the days of the year. The figures in the fifth circle between the towers and the pointers, he thinks signify the 52 years of the cycle, and the two serpents surrounding the whole signify that it was a calendar, the serpent being a symbol of the great cycle. In this respect the calendar stone and the Dresden codex would agree, both being significant of divisions of time, and the serpents in both cases signifying the



Fig. 12 —THE CALENDAR STONE.

great cycle. There are codices, however, which differ from this one and yet they contain the serpent symbol.

We present a cut from the manuscript Troano. [See Plate III.] This is supposed to be a record of feasts, a sort of priest's calendar, and the symbol on the plate would seem to indicate that such was the case. It was the custom at the feast to bear certain images around the city or the courts of the temple and to deposit them at the different gates. We have in this plate the figure of a man with a grotesque face and head bearing an image on his back. Below this we have a priest sitting in the door of a house apparently depositing certain offerings before an altar; the house being indicated by the flat roof and the altar by tongues of fire, and the offerings by the round objects before the priest. The serpent figure is found in the lower division. It seems to be twined around a column. It has four tails and a plumed head.

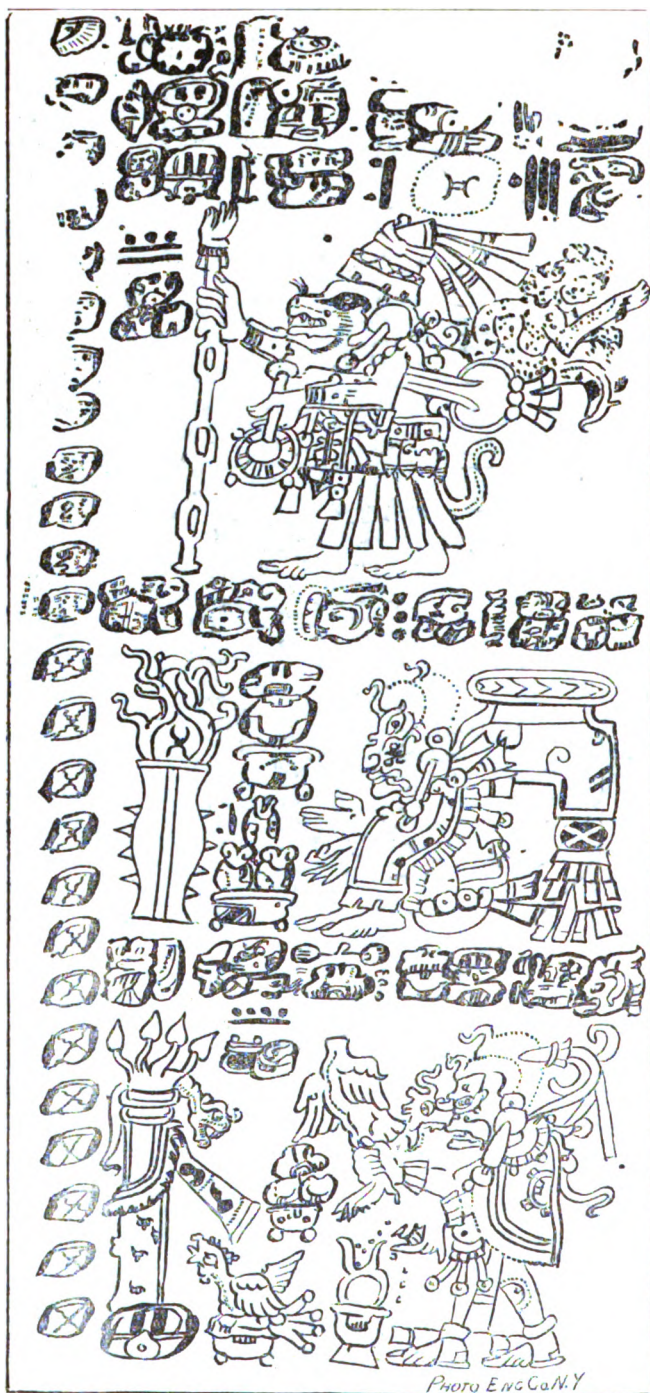


Plate III.

The priest stands before the serpent holding a decapitated bird in his hand. Between the priest and the serpent are several figures which are difficult to make out.

Dr. Thomas makes all of these figures symbols of time. He says: "I think it probable that these are cinerary urns given as symbolic indications of the idea that the years have closed; as the ashes of the dead rest in the urns, so the ashes of the years may be said to rest in these vessels. The idea seems to be borne out by the fact that the vessel in the middle division of another plate,\* has on it the figure of a cross-bones, on top of which are placed three other symbols. Possibly they may represent ears of maize or tortillas cast into the vessels. A vessel in the same division on this plate III contains fruits or goards, and a fish with bread seems to be offered to the serpent. Dr. Thomas's essay is so obscure as to be difficult to make out and yet it is possible that the interpretation of the figures as symbols of time may be the correct one. The serpent at any rate may represent the great Divinity as it does in the Idols and in the calendars.

[IV.] We turn now to the Mexican idols and the symbols which they contain. 1. We would first call attention to the resemblance between the idols in Mexico and the culture heroes of the Iroquois. Both were represented as covered with snakes. The hair and shoulders of Atotarho bristled with snake heads as that of Medusa did. The idols of Mexico were wreathed with snake heads, but the hair and face of the divinity are not so manifestly human as in the case of the culture hero. It would seem, however, that the superstition fastened itself upon the form of divinity everywhere, and made the serpent the symbol of the supernatural power both with the culture hero and the war god. It would seem as if there was a progress in nature worship, and that the same symbol, which among the Iroquois was so expressive, became among the Mexicans very complicated and still more significant.

The first idol which we shall describe is one found in connection with the goddess of death in Mexico. [Plate IV.] This is described by Bancroft as follows: "The idol was first brought to light in grading the Plaza in August, 1790. It is an immense block of bluish grey porphyry, about 10 ft. high, 6 ft. wide and thick, sculptured on front, rear, top and bottom in a most complicated and horrible combination of human, animal and ideal forms. Vasco de Gama first expressed the opinion in which other authors coincide, that the front shown in the cut represents the goddess of death, Teoyaomiqui, whose duty it was to bear the souls of dead warriors to the house of the sun. The rear view of the idol represents Huitzilopochtli, god of war, and husband of the female divinity whose emblems are carved on the front. The bottom of the monument bears various sculptured designs not shown in the cut, which are thought to represent

\*See Plate XXVIII Dresden Codex contributions to N. A. Ethnology, Vol. V.



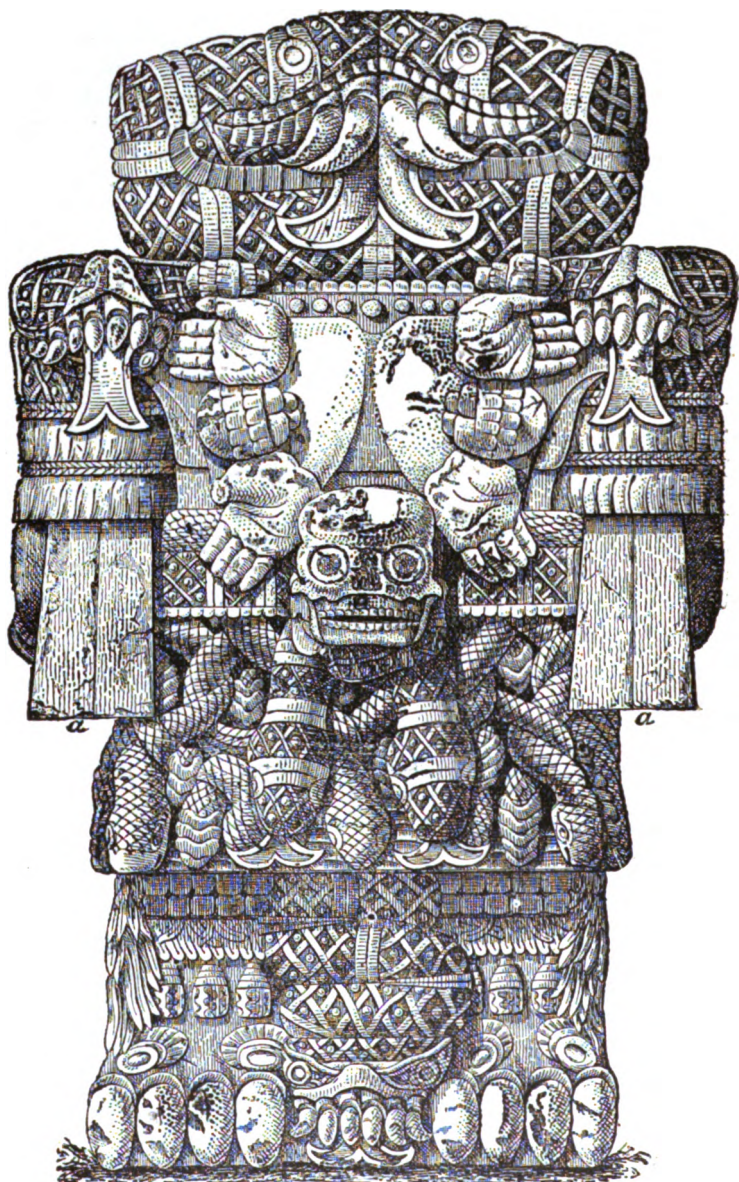


PLATE IV—MEXICAN GODDESS OF DEATH.

Mictlantecutli, god of the infernal regions, the last of this cheerful trinity; goddess of death, god of war, and god of hell, three distinct deities united in one idol according to the Aztec catechism. The idol was removed to the University and until 1821 was kept buried in the court yard, that it might not kindle anew the aboriginal superstitions.

The analysis of this idol and the examination of its different parts will bring out the following remarkable features. 1. The shape of the idol is that of the cross. 2. It is a combination of a human figure and a serpent form; no other animal is represented. 3. There is a combination of kingly drapery and serpent folds. 4. There are four hands plainly visible with the palms extended and turned out, with figures of rattles between the hands. 5. There seem to be two heads, the serpent head above and the human head below; the serpent head having teeth and fangs visible; the human head being a death head. The eyes are made with rings around them the same as Tlaloc the god of rain always has. 7. The serpent head consists of massive folds bound together and fringed, but with cross hatchings to represent the serpent's skin. 8. The shoulders of the idol or the arms of the cross are adorned with the teeth of a serpent and the forked tongue below the teeth. 9. The fringe which forms a skirt to the idol, contains serpents' heads covered with a cross-hatching which represent's a serpent's skin. Between the serpents' heads, tails all of them containing rattles. 10. Below these horrid tassels, is a serpent with its four folds covered with cross hatchings which are dotted like that on the serpent's heads above, the eyes and teeth and forked tongue resembling those in the shoulders and head above. 11. On either side of this serpent head are figures that look like claws, though they may be intended for serpent's eggs.

Mr. E. S. Holden has drawn the comparison between this Mexican idol and others found in Yucatan. He discovers a similar combination of serpent's heads and tails with human faces, arms and limbs, but with the addition of crotalus jaws and many other symbols, and thinks that there are so many striking duplications and corroborative resemblances that the Yucatec figures and the Mexican idols may be supposed to represent the same personage, Huitzilipochtli, the god of death. The identification of the Yucatec and Mexican or Aztec religions seem to be quite complete.

[V.] A comparison of the traditions and myths of the serpent and the serpent symbol will be in place here. There are many myths of the serpent as well as of the tortoise, and these seem to be very wide-spread.

On this point we quote from Mr. Edward Tylor. He says: "In the Old World the tortoise myth belongs especially to India, and the idea is developed there in a variety of forms.

The tortoise that upholds the earth is called in the Sanskrit Kûrmarāja, King of the Tortoises, and the Hindoos believe to this day that the earth rests upon its back. Sometimes the snake Sesha bears the world on its head, or an elephant carries it upon its back, and both snake and elephant are themselves supported by the great tortoise. The earth, rescued from the deluge which destroys mankind, is set up with the snake that bears it resting on the floating tortoise, and a deluge is again to pour over the face of the earth when the world-tortoise, sinking under its load, goes down into the great waters." "According to Varaha-Mihira, the Indians represented to themselves the inhabited part of the world under the form of a tortoise floating upon the water; it is in this sense that they call the world *Kaurma-chakra*; that is to say, "the wheel of the tortoise." "The striking analogy between the tortoise myth of North America and India is by no means a matter of new observation; it was indeed remarked upon by Father Lafitau nearly a century and a half ago. Three great features of the Asiatic stories are found among the North American Indians in the fullest and clearest development. The earth is supported on the back of a huge floating tortoise, the tortoise sinks under water and causes a deluge, and the tortoise is considered as being itself the earth floating upon the face of the deep. In the last century, Loskiel, the Moravian missionary remarked of the North American Indians that "some of them imagine that the earth swims in the sea, or that an enormous tortoise carries the world on its back." Schoolcraft, an unrivalled authority on Indian mythology within his own district, remarks that the turtle is an object held in great respect in all Indian reminiscence. It is believed to be in all cases, a symbol of the earth and is addressed as a mother." . . . "Among the Mandans, Catlin found a legend which brings in the same notion of the world-tortoise, but shows that by difference of the accessory circumstances that it was not in America a mere part of a particular story, but a mythological conception which might be worked into an unlimited variety of myths. The tale that the Mandan doctor told Catlin, was that the earth was a large tortoise, that it carried dirt upon its back, and that a tribe of people who are now dead, and whose faces were white, used to dig down very deep in the ground to catch badgers. The myth of the world-tortoise is one of those which have this great value in the comparison of Asiatic and American mythology, that it leaves not the least opening for the supposition of its having been carried by modern Europeans from the Old to the New World." The Scandanavian myth is that the serpent encompassed the globe. In Mexico, the serpent is frequently seen encompassing the signs of the zodiac, and we cannot help connecting the symbols on the calendar stones with myths which prevailed in the Old World. The same is true of the ornamen-

tation of the pottery. The serpent and the tortoise seem to embody the myth which, according to Mr. Tylor is so wide spread. The serpent symbol in the south-west portion of the continent is more complicated and conventional than elsewhere.

We close this article by referring to the mythological record of the creation as contained in the tablets of the creation series found in Nineveh, and described by Geo. Smith in his "Chaldean Genesis." The subject was the fight between Tiamat and the god Marduk. Tiamat, the personification of darkness, chaos, disorder, and so of the powers of evil, is the prototype of the serpent of Genesis. Marduk, chosen by the gods for the conflict, and armed with sword and bow, engages in fierce fight with Tiamat, and eventually dashes out the brains of the dragon, a particular which at once calls to recollection "the bruising of the serpent's head," as described in Genesis. There is, however, this noteworthy difference between the Babylonian and the Chaldean accounts. Tiamat is a sea-monster, the sea being regarded apparently as a great hostile power, and so associated with darkness and evil. Tiamat is, moreover, a dragon, a composite creature, not a serpent. The conflict, however, both in the cuneiform text and as depicted on Babylonian seals, always takes place on the land. And it may be observed that this same conflict, portrayed on a large scale, may be seen on a projecting part of the wall in the Assyrian Gallery of the Museum. Here the dragon Tiamat is seen retreating, but still threatening, with claws and her wide-opened mouth. Tiamat has a pair of wings and a scale-covered body. Marduk is advancing to the attack. He has two pairs of wings, and is armed with cimeter, and is brandishing a pair double tridents, which possibly represent *lightning*. On the seals he is represented either equipped and ready for the conflict, or attacking the dragon with bow and cimeter. On one seal, however, the dragon is represented as a serpent, as in the biblical story, and *pursued by Marduk*. It will seem from this that the serpent in oriental countries was representative of a nature power and that it was attended with symbols of the lightning, and other processes of nature. Our conclusion is: whether there was any connection between the two continents, the serpent symbol in both hemispheres was associated with nature worship, yet there were traditions associated with it which have very striking analogies. The serpent evidently represented a nature power, but it was more than this. It is possible that we shall find the oriental tradition still connected with the American Symbol.



## Correspondence.

### THE METALS OF THE AZTECS.

*Editor Am. Antiquarian:*

In the article by Hon. David A. Wells, entitled, "An Economic Study of Mexico," published in *Popular Science Monthly* for April, 1886. I find the following passages:

"In the Museum of the city of Mexico there is probably the best collection of the remains of the so-called Aztec people that ever has or probably ever will be gathered. Here, arranged upon shelves and properly classified, the visitor will see a large number and variety of their tools, weapons, and implements. Setting aside their fictile or pottery products, they are all of stone—the same arrow-heads, the same stone hatchets, pestles, and the like, which are still picked up on the fields and along the water-courses of New England, the South, and the West; and of which there are so many public and private collections in the United States—no better than, and in some respects inferior in artistic merit and finish to, many like articles excavated by the Shoshones and Flatheads on the Columbia and Snake Rivers. *In all this large collection there is no evidence, save a very few copper implements, the use of which is somewhat doubtful that the Aztecs ever had any knowledge and made any use of metal tools;* and in only a comparatively few instances have fabrications of copper, of unquestionable antique origin, ever been discovered in connection with Aztec remains in Mexico. And of the pottery and stone-work in the shape of idols, small and big, masks, and vases, and of which there are many specimens in the museum and throughout the country, it is sufficient to say that it is all of the rudest kind, and derives its chief attraction and interest from its hideousness and almost entire lack of anything which indicates either artistic taste or skill on the part of its fabricators. Take any fair collection of what *purports* to be the *products* of Aztec skill and workmanship, and place the same side by side with a similar collection made in any of the most civilized of the islands of the Pacific—the Fijee, the Marquesas, or the Sandwich Islands, or from the tribes that live on Vancouver's Sound—and the superiority of the latter would be at once most evident and unquestionable."

"But this is not all. It is now generally conceded that the Aztec

tribes, that have become famed in history, did not number as many as two hundred and fifty thousand, and that the area of territory to which their rule was mainly confined did not much exceed in area the State of Rhode Island. The first sight of a horse threw them into a panic, and they had no cattle, sheep, swine, dogs, or other domestic animals—save the turkey—of any account. They had no written language, unless the term can be properly applied to rude drawings of a kind similar to those with which the North American Indian ornaments his skin or scratches upon the rocks. *It is very doubtful if they had anything which would be regarded as money; and in the absence of beasts of burden, of any system of roads and of wheeled vehicles, or, indeed, of any methods of transportation other than through the muscular power and backs of men, they could have had but little internal trade or commerce.*"

I take issue with the writer on all of these points, and desire to present a few facts to show that his positions are not tenable. The relics alone which have been collected by Father Fischer and which are now in the Museum at Washington as well as those which are in the National Museum at Mexico, show that the Aztecs had ornaments which exceeded any thing ever found in the islands of the Pacific Ocean. They had metals which they used for coins, and it is known that they carried on an extensive Aboriginal trade.

The Calendar stone in Mexico shows that if they did not have a phonetic Language, yet the art of writing reached a much higher stage than ever existed among the wild Indians, and can by no means be compared with the ornaments upon skin, or the scratches upon rocks referred to by the writer.

That the Aztecs did not possess cattle, sheep, swine, or horses, will be readily acknowledged, but this does not conflict with the idea of their being in a high degree of civilization. As to their territory being no larger than Rhode Island, we leave that for the historians to decide. Mr. Wells seems to belong to that class of scholars who are inclined to reduce everything in America to the level of savage life making the wild Indians of the Northern States examples of all the tribes and illustrations of all the races which ever existed on the continent.

I wish here to briefly describe the metal articles, that Mr. Wells did not see, but which for many years have been on exhibition in the Archæological rooms of the *Museo Nacional* of Mexico:

**GOLD.**—In the case containing objects of gold the most noticeable are—three small Aztec idols used as amulets, ten large beads, and two (2) small clasps that bear the engraved image of a monkey. They may be seen in case No. 55 which stands in the center of the second room of the Department.

**SILVER.**—Near to Case No. 55 is No. 54 which contains the articles of silver. I would call attention to a *tentccl*, today called *bezote*, or lip ornament by the Mexicans. It is the silver head of an eagle, finely designed, and was found in an excavation made in a *tumulus* near Atotonilco the Grand.

**COPPER TOOLS AND WEAPONS.**—Among this interesting col-

lection of tools made of copper I note: an ax from San Luis Potosi, a chisel from the State of Tabasco, a small ax from the State of Oaxaca, and many drills and needles from divers places. The needles are about double the size of those of the pre-historic lake-dwellers of Switzerland, but very similar in form.

Among the Aztecs, ornaments of copper were sometimes worn by the poor, but this metal was chiefly employed in the manufacture of instruments for the arts. It was often alloyed with tin—usually in the proportion of 90 parts of copper to 10 of tin—and when thus hardened, or converted into bronze, wood could be worked with it. The few metal spear-points and arrow-heads found in Mexico are all of bronze.

**COPPER ORNAMENTS.**—In Case No. 53 are to be seen some snake rattles made of copper and also a copper tortoise. The latter is hollow, and was found in an ancient Huastecan grave.

In Case No. 51 are some copper tweezers from Mitla. They were used, doubtless, as in South American tribes, and, today, among the Pueblo Indians of New Mexico, to pluck out the hairs of the beard.

In the same case is a copper labret, or lip ornament, which, according to Sir John Lubbock,\* is of the same style as those worn by the Esquimaux.

The copper disc, 28 centimetres in diameter, in Case No. 52, comes from the State of Jalisco. It probably once was the property of a priest of the god of Fire. It was worked with hammer and chisel. In the center of the disc can be perceived even now, though much corroded, a human figure surrounded by the rays of the sun, among which are eight larger rays referring to the eight "hours" of the Mexican day. It has two small holes near one edge for suspension, exactly as have nearly all the discs or gorgets found in the graves of the Mound Builders of the United States.

In that magnificent manuscript book of 32 pages in the Museum—which Mr. Wells will find catalogued under the head of Paintings—No. 23—Tributes—is given a complete record of the articles which the surrounding conquered nations paid to the Aztecs annually. In this long list will be frequently seen figures of little copper bells. Fortunately the Museum possesses several specimens but perhaps none as fine as those in the Fischer Collection recently added to the Smithsonian Institution at Washington. These bells were made of hammered wires welded together and are marvels of workmanship.

**COPPER MONEY.**—In Case No. 56 appear several examples of an instrument in the form of a chopping-knife for mince-meat. They are of pure copper and therefore seemingly too soft for agricultural uses or art tools. Capt. Dupaix deposited these in the Museum on his return from his second exploring expedition to Oaxaca in the year 1806. He says in his description:† that they are of "very fine, red copper, cast, not hammered, symmetrical, of pleas-

\*Prehistoric Times, Page 464.

†Anales del Museo, Mexico, Vol. 2, p. 393.

"ing contour, correct design, anchor-like in shape." He adds that an Indian in his field near Antequera (Oaxaca)\* "plowed up an old clay pot which contained *twenty-three dozens* of similar instruments with little difference among them in quality, thickness, and size." He, moreover, asserts in another place that† "these instruments come to light very often in that country and the silver-smiths buy them for the good and superior alloy of the metal."

The belief that these objects were money is founded on the following extract from Torquemada‡ who wrote in the seventeenth century: "In others [places] they used much some coins of copper almost in the shape of the *Tau* or T, or an anchor of three or four finger-breadths of thin plates." In Tlachco at the time of the Conquest these objects, for convenience, were used in trade or exchange as money; hence comes the name *tlaco*, which the Mexicans give today to their copper coin known as *Octava de real* (one and nine-sixteenth cents) being the eighth part of 12½ cents. Cartes says§ that tin was also used for money.

But Mr. Wells believes that "the Aztecs had nothing that answered the purpose of money." And yet it is as certain as any historical fact can be that they used chocolate beans as a circulating medium. In wholesale dealings the beans were sewed up into sacks of 8,000 and half-sacks of 4,000 beans each. In some parts of southern Mexico this pre-Columbian currency is still partially in use.

As corroborative evidence that the copper "chopping-knives," above-mentioned, were also money, I would cite a living example of a similar currency existing in Kardofan and Darfur, Mahomedan provinces of the Soudan country, Africa. Akerman says:¶ "It consists of pieces of iron called *Bashash*, somewhat resembling the semi-circular knife used by leather-cutters, or, as the edges are irregular, the cross-section of a mush-room. The prototype was probably an iron arrow-head, however much the present form may differ from such an object." Can we not by a parity of reasoning claim the arrow-head as the archetype of the money of the Aztecs—and that these anchor-shaped castings of copper, too soft for agricultural and too dull for warlike uses, were the uncoined metallic currency of the early inhabitants of Mexico?

W. W. BLAKE.

City of Mexico, November, 1886.

—C—

## MODE OF FISHING BY THE DELAWARE INDIANS.

*Editor Am. Antiquarian:*

The following manner of catching shad and other fish was related to me by an old resident, Mr. J. W. Andreas, of Berlinsville, Pa., told him by his grandfather, who used to see the Indians fish.

\**Annales del Musco, Mexico, Vol. II, p. 394.*

†*Monaquia Indiana, Mexico, Vol. 2, p. 560.*

‡*Cartas de Relacion, Mexico, p. 536.*

§An introduction to the study of Ancient and Modern Coins, p. 173.

The first step was to throw up two lines of stone walls, extending from each shore in an oblique manner toward the middle of the stream where they almost met. Here was walled up a round receiver resembling a well called a "bound."

This finished, there was taken into the stream, extending from shore to shore, a certain distance from the weir, a braided mass of brushwood called a net, attended by hands enough to easily drag it along through the water. This was done to scare and sweep the fish into the circular well at the meeting of the two walls, after which it was closed. Each person then prepared himself with his spear, and the one who handled his implement with the greatest dexterity was rewarded with the largest number of fish.

"*Aquanshicola*" is the Delaware name of a large tributary of the Lehigh River, and this in the English language means "Brush-net fishing."

The whites who first came here fished for shad in this manner as did also their successors, until dams were built in the river by the Lehigh Coal and Navigation Company to feed their canal, which prevented the fish from ascending.

Col. C. C. Jones in his "Antiquities of the Southern Indians" p. 332, writes, which he has quoted from Loskiel, who spent some time among the Lenape, and who undoubtedly saw this manner of fishing "When the shad fish come up the rivers in the spring, the Indians run a dam of stones across the stream, where its depth will admit of it, not in a straight line, but in two parts verging towards each other in an angle. An opening is left in the middle for the water to run off. At this opening they place a large box, the bottom of which is full of holes. They then make a rope of the twigs of the wild vine, reaching across the stream, upon which boughs of about six feet in length are fastened at the distance of about two fathoms from each other. A party is detached about a mile above the dam with this rope and its appendages, who begin to move gently down the current, some guiding one, some the opposite end, whilst others keep the branches from sinking by supporting the rope in the middle with wooden forks. Thus they proceed, frightening the fishes into the opening left in the middle of the dam, where a number of Indians are placed on each side, who standing upon the two legs of the angles, drive the fishes with poles, and an hideous noise, through the opening into the above mentioned box or chest. Here they lie, the water running off through the holes in the bottom, and other Indians stationed on each side of the chest, seek them out, kill them and fill their canoes. By this contrivance they sometimes catch above a thousand shad and other fish in half day.\*

We find in this vicinity on the banks of the Lehigh River numerous, flat, water-worn stones of different sizes, and various forms tending however almost always to the oval shape, having notches worked into the sides opposite each other, which are correctly called "net sinkers."

\*"History of the Mission of the United Brethren," etc., p. 95. London, 1794, in Antiquities of the Southern Indians by C. C. Jones, p. 332.

As it required considerable weight to keep on the bottom a "brush net" to prevent the escape of the fish, it is certain that such objects were attached to the net for this purpose. "Such plummets are, as a rule, bulky, and were probably used to weigh down the long grape-vine ropes with which the Indians were wont to drag the rivers in driving the fishes before them \* \* \* \*. The noise of these stones rolling along the bottom would have materially assisted in frightening the fishes from their hiding places and in compelling them to swim toward the desired point."† Many small ones have been found. So small and light indeed that they would have been of no use at all fastened to a net. My collection contains such. These were, I suppose, used in connection with hook and line. Plummets made of lead and weighing several ounces are now used here in this manner in fishing for black bass, a fish planted into streams here a number of years ago. Dr. Rau, curator of the Archaeological department of the Smithsonian Institution, figures in his "Prehistoric Fishing in Europe and North America, pp. 158-9, an interesting series of these objects found on the banks of the Susquehanna at Muncey, Penn. The largest is eight inches across its broadest part, and one and three-eighths inches thick in the middle, weighing two and seven-eighths pounds. He thinks it was used in weighting a set net.

A very large specimen of this kind, nine and one-quarter inches long, three and three-quarter inches wide at its broadest part which is at one end, two inches thick at the same place and weighing three and seven-eighths pounds was picked up from the surface by the writer last fall on Lehigh Island in the Lehigh River at this city. It is a water worn stone. I say found on the surface; originally it was dug out of the sand, how far down it is impossible to say, and thrown aside by the sand diggers who did not know its scientific value as a relic. This was either used as an anchor to an Indian's boat, or in weighting a small net. Sinkers so large are seldom found. To call them anchors would be preferable.

A. F. BERLIN.

Allentown, Penn., Dec. 6, 1886.

### —o— — "OLD FORT" IN KENTUCKY.

*Editor Am. Antiquarian:*

I have been surveying some new enclosures and have re-surveyed some of the old ones, have made a good survey of the Old Fort in Kentucky, opposite to the old mouth of the Scioto River. The walls of the fort are 10 feet in height. From the end of the east covered ways to west end of the western ones it is just 4,500 feet. These works are now partially demolished by a new railroad now building.

I have obtained another small copper axe and a copper tube from Greenup Co., Ky., opposite here.

Portsmouth, Ohio.

T. H. LEWIS.

---

† "Antiquities of the Southern Indians," by C. C. Jones, p. 338.

## A "SILVER FIND."

*Editor Am. Antiquarian:*

One of the most interesting and valuable finds that ever came under my notice was made last July. There is, opposite Portsmouth, Ohio, on the Kentucky side of the river, a high bluff which was quite an Indian resort in early days. Upon the summit of the bluff and near the edge is a high mound, having a slightly flattened top. From this mound a magnificent view of the Scioto Valley can be had, but a bend in the river shuts out most of the view that otherwise might be had up and down the Ohio.

Until last July this mound had never been opened. It was regarded by the people of that neighborhood as a great curiosity, and whenever a stranger came into that locality to stay any length of time he was taken to this mound and told all about its past history and what is presumably contained. (Such people always know all about mysteries).

In the early part of July two young men living in Portsmouth and one of them in the employ of a merchant there conceived the idea to explore the mound, and accordingly set out for the place one Friday. From what I can learn (details of the work and find almost lost) they began at the summit and sunk a shaft straight

down. They encountered much charcoal, but no bones; after having gone down some four feet they suddenly came upon and took out a well preserved skull, quite large. The accompanying parts of the skeleton were so decayed that they made no attempt to preserve any parts save the skull.

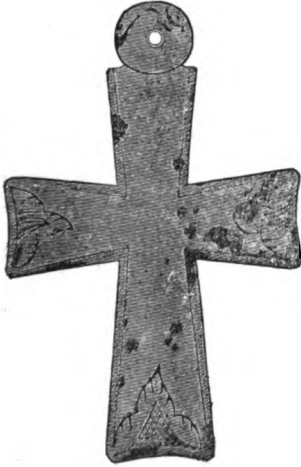
They found a few inches below the skeleton and mingled with much charcoal, 103 jet beads, 30 silver buckles, 2 silver crosses. Nothing more was found although the excavation was carried on down some 10 feet. On the way home while passing through a corn-field near the mound they found a large grooved axe, the groove being nearly in the centre, one edge sharp presumably for cutting, the other having been used to hammer with. The

material was porphyry, the specimen was highly polished, the groove extends all around. The axe weighs  $3\frac{3}{4}$  pounds, is rather flat. It is about the most peculiar shaped one I ever saw.

These relics were brought to this city (Cincinnati) soon after being found and were sold to Mr. Mercer. The silver in them alone was worth \$12.00 at current price. He held them until February



1st, 1887, and then sold them to the writer. A careful examination and an earnest inquiry has enabled the writer to find out this much of their history. Upon one of the buckles is the French Crown of 1730 or 1740, with the Catholic emblem, a heart. The Crosses are decorated with small leaves but furnish no clew as to their date. The whole outfit probably belonged to a convert of the Jesuit Missionaries, and we can only conjecture as to the rest.



Similar finds have been made in Southern Wisconsin and in one instance in West Virginia, but no find was ever made where the amount of silver was so great. The illustrations accompanying this article show the exact size of the pieces found.

There have been a great many relics found in the banks of the Ohio a little distance above Portsmouth. It seems to be a locality especially rich in relics that date back about 200 years. There was brought to me a month ago by a gentleman residing in that locality some very curious bone and shell implements which he claimed he had found along the shore at the foot of a high bluff. The river in a recent flood had washed them out and scattered them along the water edge. He picked up several shell discs about the size of a dollar, some of them drilled in several places and others having but one perforation. Among the objects of interest there were several large human teeth (mostly molars) which had been perforated and had been worn as beads. I had never seen anything like them before and was greatly interested in noting the fact.

Numbers of wild turkey bones broken off short and sawed (evidently with a flint tool) to a round edge occurred. The average length of these was  $1\frac{1}{4}$  inches; beaks of birds (wading birds) polished from use, some drilled and worn as beads and others worn to a point and showing use as drills or perforators; still other drills and perforators made from the bone taken from the front leg of the deer were found. They especially were well preserved and much above the average size of bone awls. Several were 8 inches long and nearly as sharp as needles. There were no two alike in size or in make.

I succeeded in making the purchase after some bartering and have carefully examined the entire lot. I can safely say it is the most complete lot of bone and shell implements I ever saw.

W. K. MOORHEAD.

Cincinnati, Ohio, March, 1887.





## MR. PERKINS' COLLECTIONS OF COPPER RELICS.

*Editor Am. Antiquarian:*

In reply to your questions I will say that I have never known of a copper relic found in an effigy mound; but have some that were found in fields near such mounds and a few that were found in conical mounds.

A large proportion of the coppers I have collected were turned up by the plow, but some have been found at considerable depths.

They were undoubtedly made from both the float copper—found in such abundance all over this State—and the metal taken from the ancient copper mines near Lake Superior.

I do not think their manufacture can be ascribed to any particular tribe, but rather to all the races of men who have, at different periods, occupied this region.

In 1875 I sold 113 coppers to the State Historical Society of Wisconsin, and gave them 30 more.

In 1885 I sold 150 to the Public Museum of the city of Milwaukee, and in 1886 sold 50 more to the same institution.

I have given to some of the public and private collections, of the United States and Europe, about 50 coppers, and have still in my possession several hundreds of these interesting objects. All of them were found in what is now called the State of Wisconsin, and they exhibit various degrees of skill in their manufacture from the rudest possible to the highest.

F. S. PERKINS.

Burlington, Wis., Jan. 10th, 1887.

---

*Editor Am. Antiquarian:*

Last week I visited two very interesting groups of mounds in Polk Co., Wis., located a few miles north of Osceola Mills, on the right bank of the river St. Croix as you go north. I did not have time to closely examine them, but think there are about 21 mounds in each group and the groups nearly one mile apart. The wagon road divides one through its center leaving standing one side which is fully 15 feet high and about 30 feet in diameter—longest way. It is a circular mound. These mounds are clearly defined and stand out in as bold relief as those seen at Aztalan. The early part of this month I examined a series or group of mounds about 2 miles south of Waterloo, Wis. They are in a line running north and south—23 in number, 21 of which are conical and 2 the shapes of animals. Nearly all of them had been explored. I see by Sunday's *Inter Ocean* that an interesting group of mounds have recently been discovered not far from Schwartzburg, Washington Co., Wis.,—21 in number.

A. H. PORTER.

Madison, Wis., Nov. 16th, 1886.

## BOOKS ON MYTHS AND MYTHOLOGY. II.

*Editor Am. Antiquarian:*

I send an additional list of works in the English language, found in the libraries of the Bureau of Ethnology, Geological Survey, and The Scottish Rite Masons, Washington, D. C.

Bible Myths, and their parallels in other religions. N. Y., 1883, 589 pp. Anonymous.

Bowker, Jas. Goblin Tales of Lancashire. London, n. d. 266 pp.

Collier, Margaret. Prince Peerless. N. Y., 1887. 267 pp.

De Gubernatis, Angelo. Zoological Mythology, or The Legends of Animals. 2 vols. London, 1872.

Dorman (Rushton M.) The Origin of Primitive Superstitions. Philadelphia, 1871. 398 pp.

Dyer (Rev. T. F. Thiselton) English Folk-lore. London, 1884. 280 pp.

Frere (Mary) Old Deccan Days. London, 1881. 304 pp.

Gordon (H. L.) Legends of the Northwest. St. Paul, Minn., 1881. 143 pp.

Gould (Chas., B. A.) Mythical Monsters. London, 1886. 407 pp.

Grimm (Jacob) Teutonic Mythology. Tr. by Stallybrass. Vol. I, 437 pp. London, 1880.

Hearn (Lafcadio) Stray Leaves from Strange Literature.

Jones (Wm.) Finger-ring Lore. London, 1877. 534 pp.

Kavanagh (Morgan) Myths traced to their primary source through Language. 2 vols. London, 1856. 328 and 421 pp.

Lang (Andrew) Custom and Myth. 1885. 304 pp.

Lee (Vernon) Tuscan Fairy Tales. London, n. d.

Linton (E. Lynn) Witch Stories. London, 1883. 320 pp.

Magnusson (Eirikr) and Morris (Wm.) Three Northern Love Stories and other tales. Tr. from the Icelandic. London, 1875. 246 pp.

Meinhold (W.) editor. The Amber Witch. London, 1861. 171 pp.

Menzies (Louisa L. J.) Legendary Tales of the Ancient Britons. London, 1864. 190 pp.

Middlemore (Mrs. S. G. C.) Round a Posada Fire. [Spanish legends] London, n. d. 146 pp.

Morris [Richard, LL. D.,] Legends of the Holy Rood. London, 1871. 240 pp.

Mulock [Miss D. C.] The Fairy Book. N. Y., n. d.

Murray [A. S.] Manual of Mythology. N. Y., 1884. 368 pp.

Napier [Jas.] Folk Lore [From the West of Scotland] Paisley, 1879. 181 pp.

Rink [Dr. Henry] Tales and Traditions of the Eskimo. Edinburgh and London, 1885. 472 pp.

Scoffern [J.] *Stray Leaves of Science and Folk-lore.* London, 1870. 485 pp.

Sikes [Wirt] *British Goblins.* [Welsh Folk-lore, etc.] London, 1880. 395 pp.

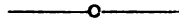
Smith [J. Moyr] *Tales of Old Thule.* London, 1879. 199 pp.

Unkulunkulu, or *The Tradition of the Creation.* [Zulu texts on various topics, with English translations in parallel columns]. No title page.

Valentine [Mrs. L.] *Eastern Tales.* ["Chandos" Classics] London, n. d. 540 pp.

J. OWEN DORSEY,  
Washington, D. C., Box 591.

March 19, 1887.



### *b* A "CEREMONIAL OBJECT."

*Editor Am. Antiquarian:*

Last summer the writer procured from a Mr. Jacob, a farmer living about seven miles northwest of this city, one of the so called "ceremonial weapons," to which is attached a history of more than common interest. This relic, a reminder of a nearly extinct people, was kept in possession of the Jacob family almost a century and a quarter. An Indian on his way from the mountains to the then Moravian village of Bethlehem, Penna., loaded with furs and skins, gave it to the grandfather of the gentleman who allowed it to come into my possession, for a certain quantity of tobacco. The mountains from which the Indian came, are, I suppose, the Kittatinny or Blue mountains about fifteen miles north from here. The weapon is made of steatite, tinged with green, and is beautifully polished, much of this polish has, however, been caused by the use of it as a hone for a razor. It is somewhat damaged at one end of the perforation. This may have occurred while in the hands of the white owners. It is near to an oblong in shape, with edges slightly curved, which are blunt, three inches long, two and one eighth inches broad at one end, and decreasing in width to one and seven eighths inches at the other. The perforation measures in diameter one half inch. A section of the implement from edge to edge would form a perfect lozenge.

I am not aware, although for more than a decade of years a careful student of antiquities of stone, that the mystery surrounding these interesting implements has ever been satisfactorily explained. Neither would the writer, who classes himself as an amateur, undertake to bring to light their true design. Although written about as "banner stones," such able and learned archæologists as Charles Rau and C. C. Jones call them "ceremonial weapons," a name to my mind very appropriate, while the former title is altogether out of place and inaptly given.

I have stated that the so called "ceremonial" object was exchanged for tobacco by an Indian from the hunt. Of what use was the relic

to him while on an excursion of this kind? He certainly could kill nothing with it even if he so desired. One blow would have shivered it into fragments. In the chase too he would naturally divest himself of all unnecessary material. Did the savage in his untutored and superstitious mind attach to this implement some magic power, the aid of which could be invoked by some strange ceremony while alone in the forest? Or did he imagine that the possession of it while on an hunting excursion would cause him to be successful in procuring much game. I incline to this belief from a careful consideration of the facts as given to me. For this, and no other purpose, was this object carried along.

A. F. BERLIN.

Allentown, Penna.

---

### EFFIGY MOUNDS ON THE KICKAPOO RIVER.

*Editor Am. Antiquarian:*

I received your postal card some time ago, with a request, for some information, as to the mounds or effigies, on the Kickapoo River. The location of the most important of these mounds that I noticed are on Sec. 26, 25, and 24, T. 12, N. R. 3, W. near the boundary line, between Vernon and Richland counties, although they may be found in many other localities in this vicinity. The above sections are on the east fork of the Kickapoo River, above the village of Reedstown, and the mounds are on a plateau, principally above high water mark on the east side of the river, this plateau is from 80 to 120 rods in width, extending from the bluff to the river. In crossing the above sections the river runs nearly south. The effigies or mounds are grouped together in certain places, and consist of figures of animals, birds, etc., and some of the usual conical shaped mounds from 12 to 20 feet in diameter, which of course are familiar to you.

In one place I noticed a figure of a complete cross, the only figure of that kind that I have ever noticed in this part of the country. The plowshare has leveled many of these mounds I presume, by this time, as it was some 10 years ago, when my attention was first attracted by them as effigies, being then engaged in land surveying. The Kickapoo Valley, has at one time, particularly above and at the forks, been thickly settled, if the ancient mounds scattered along either bank of the stream are any indication of that fact, as all of the mounds indicate a long period of time since their construction. At one place, where a large elm tree had been cut down, that had grown on one of these mounds, I counted the concentric rings on the stump, and the tree by that was 175 years old. I note this item, not but that I consider the mounds many hundred years older, but for the reason that many people will say "the Indians threw up these mounds, perhaps 50 or 60 years ago."

At another point, on the west bank of the Kickapoo, at or Near Gays, Mills on Sec. 28, T. 10, N. R. 4, W. is a group of effigies.

The figure of one animal in particular, has attracted more or less attention. It resembles a wolf, and is some 5 or 6 rods in length from the tip of the nose to the end of the tail. The figure is well proportioned and symmetrical. Close to this is the figure of another animal, that I should call a bear, and several other mounds in the group which I never have examined closely.

The mounds in the south and central part of this county (Crawford) I think you have examined, or a part of them at least, so it will not be necessary for me to go into any specific details, further than I think I will tell you of the exhuming of a giant's skeleton at Lynxville, a few years ago, in this county. In the year of 1864, parties were engaged in excavating in the east bank of the Mississippi River, for the foundation of a warehouse. At a depth of 14 feet below the surface, the workmen came upon the skeleton of a giant, in a tolerable good state of preservation, the skeleton was 8 feet 2 inches in length and measured 2 feet 2 inches across the pelvis or from the out edge of the hip joint to hip joint. A quantity of bears claws, and claws of some other animals apparently, worn as a necklace, were found. They had holes drilled through them and had been strung. The bowl of a pipe, finely polished and of fine workmanship, made of obsidian, was also found with the skeleton.

The pipe bowl was finely wrought into the figure of an animal (apparently a lynx). There were two layers of human bones above him, the first some 4 feet below the surface, the next layer some 8 feet from the surface. This shows that a very long period of time must have elapsed since the giant was interred. We have no reason to suppose that the giant was buried at first 14 feet below the surface. I have this theory about his interment that he was buried 6 feet below the then surface of the ground, that by the gradual disintegration of the point of rocks some 60 yards distant and the gradual drifting of the sand down the slope from the point of rocks the growth and decay of vegetation had kept accumulating over his remains in the course of ages, until we have tolerable good reasons to think that 1,000 years at least have rolled away since his burial.

At another point, about six miles below where this skeleton was found, at the mouth of Sioux Coulee, on Sec. 18, T. 8, N. R. 6, W, one of the agents or employes of the Smithsonian Institute, at Washington, exhumed the remains of another skeleton the size of which was calculated to be about 9 feet in length. Some copper implements were found with this, a copper breast plate and hatchet amongst them.

About 3 miles N. E. of where this first giant remains were discovered was the huge figure of a man lying on his back, the limbs, head and all were perfect in form. This figure was about 8 rods in length some 30 years ago when I first discovered it, but the plow I think has nearly destroyed the last trace of it or nearly leveled it with the natural surface. I found near this figure a bird (a brant

I should judge by the size) partly sculptured out of a hard smooth rock, the breast and neck and a part of the head had been neatly polished and was finely proportioned, and if the workman had finished his work in the style he had commenced no sculpture at the present day could have excelled it.

I will close this rambling letter, but if I can give you any information in a future letter in regard to our prehistoric remains in this region, I will do so with pleasure.

PIZARRO COOK.

## MOUNDS IN MADISON CO., OHIO.

*Editor Am. Antiquarian:*

Four miles west of London, on the farm of Judge Thomas Jones, skeletons have been found in mounds together with various implements. The mode of sepulture differs. Some skeletons lie flat, others are in a sitting posture, others are doubled up. In some mounds were found pieces of pottery peculiar patterns, stone axes and sea shells. On the farm of Mrs. Butler there is a place known to have been used as a sort of hospital by the Indians on account of the water. Such at least is the description of Jonathan Alden who lived a prisoner for many years among the Indians. A grave was opened here but no human remains were found but stones in the grave which had been heated so hot that they were dissolved into lime. Signal mounds on which beacon fires were burned extend along the higher point of both Oak Run and Deer Creek. On the farm of John Dunn, on the southeast corner of Monroe township, is a "Temple Mound" oval in shape, 600 feet around the base and 25 feet high.

On the farm of Fulton Armstrong a bronze tomahawk of superb workmanship, with a steel edge, and beautifully traced with engraving, was found; it is an exact copy of the tomahawk given to Gov. Worthington by Tecumseh. The instrument was undoubtedly of recent origin as the mound builders knew nothing of bronze or steel. The mound builders were very skillful in making arrow heads, and knew a great deal of gunnery, as many darts are chipped off on each side so as to give them a twist, thus insuring a consequent accuracy of flight.

Hon. George Woodbridge, of Marietta, has a very fine collection of the early historical relics of Ohio, and especially of the prehistoric race. Among other things, in a mound lately opened near Marietta were found a skeleton, a huge piece of mica, a long copper needle, a copper half circular ornament, and a beautiful slate pendant.

Dr. Strain, of this city, takes a great interest in matters of this kind and has the nucleus of a splendid collection. The most remarkable thing in his possession is a copper "spade," belonging to Mr. John Chambers, who prizes it very highly. It is of pure cop-

per, is about  $7\frac{1}{2}$  inches long by 3 wide, and weighs about two pounds. At one end the edges are curved up and in, forming a hollow groove in which a handle was evidently placed and the instrument used for digging. It is a rare and valuable specimen.

But the finest collection of these relics in town is that of Charles Creamer, on South Main street. We had the good fortune to examine this lately and will briefly describe it. The collection includes a number of fine axes, the largest of which is  $9\frac{1}{2}$  inches long and weighs 9 pounds; there is also a "water worn" ax, made out of a waterworn boulder; also a very finely wrought syenite ax, grooved on top and well sharpened. Of pestles, there are quite a number in excellent condition; one of them is double ended. Mr. Creamer also has six fine tomahawks, a heavy round ball of stone, 3 inches in diameter, and probably used in throwing, seven excellent hammers, all blunt at both ends with a groove around the center, six fine wedges fleshers or tomahawks, as they are variously described, two war club heads from the Susquehanna River, nearly the whole of a regular war tomahawk of green slate stone, a stone bullet mould, a stone button, a green slate tube  $2\frac{1}{2}$  inches long, which Prof. McLean says was used as a badge of authority, a green stone pendant, shell beads, and a great number of arrow heads, spear heads, and flint implements. Another more recent relic in the collection is a red Indian pipe made by a cousin of Sitting Bull and received from Mr. Wm. O'Neill now in Minnesota. Of these specimens the following are especially fine and rare: A small quartzose hammer, about two inches long and weighing 12 or 14 ounces; a large "flesher" made of metamorphic stone, found in a gravel bank on the California road; a piece of a large greenstone pipe; a flat greenstone implement, 7 inches long tapering at one end with two little holes in the flat side; a double arrow head, nearly cross-shaped; a white flint spear head large at the base and tapering very rapidly. Most of these came from the farm of Cyrus Hamm, near Newport.

It seems that there are in this county three kinds of mounds, viz: signal, burial and temple, varying greatly in size. In these mounds are found human and other remains, some of an early race and others of the Indians. To show how old, however, these mounds may be we know of a small mound in Franklin county that contained in connection with human bones, the tooth of a long extinct rhinoceros, formerly inhabiting this country. We also find in our county great numbers of flint arrows and darts as well as other stone relics, and nearly every farmer's boy finds something of this nature every year.

London, O., Jan., 1887.

COMP.

## Editorial.

*Part. 4. D*

## ARE THERE ANY DRAGONS IN AMERICA.

We have given in this number a long article on the serpent symbol and furnished suggestions as to its origin. The subject introduces another. Is there upon this continent anything that looks like the symbol of the dragon? In reference to this point we have a few things to say. It sometimes seems as if the Dragon which is so common in Europe and Asia, and which figures so conspicuously in oriental mythology was also known in this country, and yet there is some uncertainty about it. We call attention to the different figures which resemble dragons.

First to the sculptured idols in Central America, which represent monstrous creatures, with jaws resembling that of the dragon. There are certain sculptured figures on the facades of certain buildings in



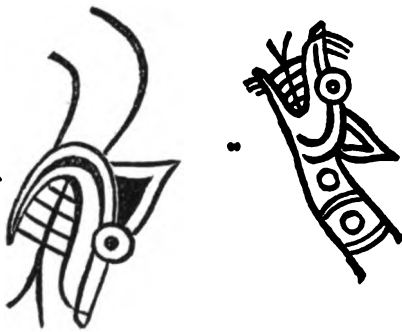
FIG. 1.—MONSTER'S HEAD.

Mexico which look as if they might have been intended to represent a dragon; one such may be seen in the pyramid of Xohicalc, Fig. 1. Here there is a monstrous mouth with forked tongue and



four fangs or teeth. The lower jaw has three prongs, while above the upper jaw there is a peculiar curved figure resembling smoke, and below it something resembling foam. Above the head there are seven forked teeth or feathers, and back of the head a peculiar curved projection. Below this monstrous mouth are two rows of feathers or some other ornament, and below the lower jaw a curved or crescent shaped object. The whole figure represents a nondescript creature. It is neither a serpent or a crocodile, though the mouth resembles that of the crocodile in some respects. Was this a dragon?

Second, painted rocks and inscribed shells occasionally present figures which resemble dragons, to these we would call especial attention.



The question which arises in connection with these figures is whether they were dragons or serpents. The paintings represent figures which are worthy of study. An analysis of the figures will solve the problem. The following features may be recognized in each:

1. A large open mouth. The mouth in some of the specimens is clearly defined, and may be said to be in profile; in others a front view is presented. In one case, Fig. 3-4, the mouth has a row of teeth resembling the tusks of the wolf, some might call them dragon teeth. In another case, Fig. 5, the tusk or tooth is upon the upper jaw.

2. The eye is very conspicuous in all the serpent figures. In the gorgets the eye is surrounded by a series of circles, the number of which varies from three to twelve.



Figs. 3, 4, and 5.—SERPENTS IN PERU.

There is an oblong loop in all of the gorgets which connects the eye with the rim, and in most of them, the loop is filled with dots which in number vary from one to thirty. This loop is sup-

posed to represent the neck of the serpent or dragon. The eye, in the other figures from Peru, has a single circle surrounding it but it is very conspicuous, being raised above the head.

3. The neck is another feature; this in the gorgets is represented by an oblong loop which is filled with cross-hatchings in some cases and with straight lines in others, designed to represent scales. The bands around the loops are filled with dots, designed to represent spots upon the serpent. Fig. 6.



Fig. 6.—SERPENT FROM THE MOUNDS.

ices and its genuineness is doubted. The lines which run from the eye to the mouth in the gorgets show no signs of the feather symbol. We doubt if the feather-headed serpent was known to the Mound Builders.

5. There are joints in the serpents. In the gorgets the joints are represented by rings which vary in number from one to five. In the serpent from Nicaragua the joints are represented by feathers. It is noticeable that there are four joints in each of the serpents, viz: in those from the gorgets and that from Nicaragua, but in the serpent from Peru, there are five spots.



Fig. 7.—FEATHERED SERPENT FROM NICARAGUA.

6. The tails in all of the figures are represented as having rattles, this is universal. The tablet from Paint Creek, Ohio, the stone pipe from New Mexico; the shell gorgets from Tennessee; the serpents from Peru; all have rattles and the feathered serpent from

Nicaragua may be supposed to have the same features modified. These are called by W. H. Holmes rattle-snake gorgets, but according to his own description, and judging from the engravings given, the snake would appear to have legs as dragons have. Three such gorgets can be seen on Plate 65, Annual Report for '81. One of these is from the Lick Creek Mound, Tenn., another from the McMahon mound. The figures, however, in these gorgets are very rude and imperfect, and what appear to be the legs may have been intended for scales. These so-called legs constitute the divisions or joints in the body of the snake similar to the rings in the figures given above. They however appear in pairs in each snake, and they have a great resemblance to legs. It is possible that the so-called snakes in these gorgets were intended to represent crocodiles. And so we are thrown off from the identification of dragons in this place.

Third: The emblematic mounds present a great variety of figures. It has been a common custom with archæologists in

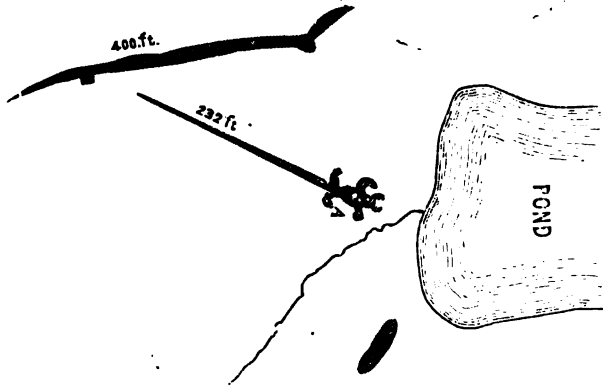


Fig. 8.

this country to speak as if there were crosses among them. Dr. I. A. Lapham thought he recognized dragons among them, Fig. 8, but we have elsewhere shown that he is mistaken. The figures which he called dragons, were birds, and have no resemblance

to the fabulous creature. The nearest approach to the figure of a dragon is the one which was intended to represent a lizzard. Fig. 8. This was situated on the edge of a pond near Baraboo, Wis. There are also composite mounds, Fig. 9, at Horicon, Wis., which resemble dragons, but the resemblance is imaginary.



Fig. 9.

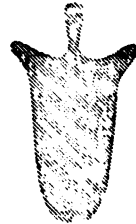


Fig. 10.

Dr. J. W. Phene imagined that he recognized the dragon among emblematic mounds, but he took Dr. Lapham's interpretation and did not identify any such figure by a survey.

Part, 4, D.

## LITERARY NOTES.

BY THE EDITOR.

**COSMOGONIES IN THE EASTERN TRADITION.**—Mr. W. P. James, in a paper read before the Victoria Institute, April 5, '86, says that the theories of creation admit of being roughly classed, as, first, those which bear traces of a primeval tradition, and in form, resemble historical documents. Second, those which leave a mythological stamp and probably arose from the hardening of symbolic language. Third, those which appear to have sprung from independent speculation, the philosophical or metaphysical cosmogonies. He speaks of the Egyptian and quotes from Diodorus Siculus. A self-begotten mind began to breathe over chaos; the elements then proceeded to sort themselves until land and sea were distinct from each other. From the soft slime of the still moist earth, the sun's rays produced various animals. Here we have the process of the first day described in Genesis, but the work of the fifth day is introduced early. The creation tablets, Mr. James thinks, are not so old as they are claimed, were probably composed in the time Assurbani-pal, B. C. 1668. But Mr. Boscawen in his comments, thinks that the Chaldean account was very old. He says, there are three conditions; 1st, the Phœnician, 2nd, the Hebrew, and 3rd, the Chaldean. All had a common origin. The Phœnician came from the shores of the Persian Gulf, the birth-place of the Jewish people and the place where the Chaldeans always lived. He says, that the Hebrew and Chaldean accounts start with the idea of a pre-existent earth; both presenting the same conception that the earth was without order or arrangement, without form or void, and that the whole was shrouded in darkness. In the third line of the first Chaldean tablet, we have the limitless abyss, as the generator of the heavens and the earth; and in the fourth line, the chaotic sea.

"When above the heavens were not yet named, and below the earth was without a name, the limitless abyss was their generator, and the chaotic sea she who produced the whole. Their waters flowed together in one. No flock of animals was yet collected, no plant had sprung up. When none of the gods had as yet produced."

Mr. Boscawen says, another point of contact here in the Hebrew and Chaldean accounts is that the greatest prominence is given to light as the great product of creation. He translates "no flock of animals" in the sixth line, "the darkness had not withdrawn," or "the great darkness had not been gathered up." Then follows, "the plants had not sprung up." Still further he thinks that the two words "lakhmu" and "lakhamu," in the tenth line, signify the division between upper and lower halves of nature, the earth and the heavens, corresponding to the firmament in Genesis.

"Lakhmu and Lakhamu were produced (first),

And they grew in (solitude).

Asshur and Kishar were produced (next),

(Then) rolled on a long course of days."

He speaks of the fifth tablet of the series and says "it relates to the creation of the sun, the moon, and the stars; which in many details agrees in a remarkable

manner with the first chapter of Genesis; and although there are differences in some, it is those very differences which enable us to judge of its antiquity. In the Hebrew account of the creation of the great lights, it will be remembered that they come in the order of the sun, the moon, and the stars; but their order is reversed in the Chaldean Tablet, where we get the stars the moon, and then the sun last of all. This argues an antiquity which is very great in one way, for we know that the moon, in the old system, always had priority of the sun. Again, it indicates that the tradition must have been drawn up by a pastoral people to whom the moon was always more favorable, and by whom it was held in greater respect than the sun. In fact, the general grouping of this Tablet shows that it was written at a time when the Babylonians had not shaken off the earliest traditions of their old moon-worship, and become attached to the worship of the sun, as they did at a later period."

Mr. Boscawen says of the Chaldean and Hebrew traditions that they are essentially the works of men who were students of nature. The confusion of darkness is the beginning of things, there is the necessity of light for the existence of all nature. In this they differ from the Zoroastrian and Indian traditions. They are full of mythological and philosophical matter, but these deal with the operations of nature. This is especially manifest in the fifth tablet just as we are told in Genesis, the lights were fixed for the measurement of time and the seasons, so in the tablets we are told that the moon and the stars are fixed for the same purpose. The first chapter of Genesis embodies a careful resume of the laws of nature. It shows how step by step the various phenomena of nature were created by the hand of the Almighty, but it does not attempt to arrange them according to geological strata. He says, "this at any rate, is the position I have always taken in regard to the first chapter of Genesis." Another tablet which was discovered about two years ago, contains an account of the war between Marduch and the demon of darkness. It is simply a myth founded on the first fight between light and darkness. The first work of creation is the destruction of darkness which brooded and coiled around the earth, as the serpent is said to have coiled around the cosmic egg, so that the darkness which for centuries had shrouded the earth was destroyed by the first ray of light.

There is one other point. It is remarkable that in the Egyptian accounts we get no trace of the old traditions of the creation or the deluge. It is curious that the African races, almost without exception, are void of these traditions. It is the Semitic family in whose hand was placed the duty of handing down this tradition. There might have been a time when there was a common tradition of the beginning of all things, current among the Semitic people which in Chaldea became slightly tainted with Accadianism, and in Phœnicia slightly influenced by Egyptian teaching, so that it has come down to us in forms different from the primeval traditions. Still, underlying all this there is a common tradition which, if you strip it from its Accadianism and Egyptian influence and lay it side by side with the account of Genesis, will show a remarkable agreement to an old primal stock from which it all came.

THE DOOMSDAY BOOK.—Eight hundred years ago, William the Norman conquered England and then sent out certain clerks, monks and priests, mostly men who knew Latin and could practice the mystic art of writing, to take an account of the kingdom which he had conquered. To find out how many

hides of land there were, how many vassals, villains, cottars, surfs, freemen, tenants; how much wood, meadow and pasturage; how many mills and fish ponds, and what was the gross value of all. This was the Domesday Book. "Of the condition England eight centuries ago the classes that inhabited it,—the barons, thanes, freemen, free women, socmen or freeholders, villains or churls, and serfs or theows, their means of existence; their culture of land and of the vine; their fisheries, mining and salt making; the enormous power of the church in those days; of the gradual unification of the kingdom, and the re-ascendancy of the Saxon elements, there are abundant evidences in the Domesday Book. Visitors to the Public Record office, if they wish to see this priceless treasure, will find a stout, rusty, strongly-barred iron chest, in which the volumes were used to be kept. "Domesday Book consists of two volumes of different size and appearance. The first, in folio, contains the counties of Bedford, Berks, Bucks, Cambridge, Chester and Lancaster, Cornwall, Derby, Devon, Dorset, Gloucester, Hants, Hereford, Herts, Huntingdon, Kent, Leicester and Rutland, Lincoln, Middlesex, Northampton, Notts, Oxford, Salop, Somerset, Stafford, Surrey, Sussex, Warwick, Wilts, Worcester, and York. The second volume in quarto contains the counties of Essex, Norfolk, and Suffolk. The larger volume contains 383 leaves of parchment, with five old fly-leaves at the beginning, and four at the end. The leaves measure  $14\frac{1}{2}$  in. by  $9\frac{1}{4}$  in." The four hundredth anniversary of the event has just been celebrated in England.

THE HITTITES AND THE CANAANITES.—The Hittites were a race of Cappadocian origin and their chief center of influence was in Northern Syria in the neighborhood of Carchemish. Like the Arabs, the Assyrians, the Aramæans, and the Hebrews, their primitive state was on the Arabian side of the Persian Gulf. Elam, though geographically connected with the region, had a population which spoke agglutinative languages and bore no ethnological relationship to the Semitic tribes. The culture and civilization of Babylonia, was founded by a race which spoke their language. The Semitic invaders after adopting the culture of this population became supreme. The Hittites moved out from this region by way of Northern Syria, halted some time at Hebron and then passed on to Egypt, where they established for some generations a dynasty of the Hyksos, or Shepherd Kings. A century before the Exodus, the Shepherd dynasty was overthrown. Tothmes prosecuted great campaigns against the Hittites, invaded Canaan and Syria, drove them out of Hebron and overran the country as far as the Euphrates. The Canaanites at the time of the Hyksos kings are supposed to have been in the north part of Syria, migrating south. Abraham passed through the land of the Canaanites and occupied the region which had belonged to the Hittites. The Canaanites made great advancement during the time of the sojourn in Israel. We find but few traces of towns or cities when Abraham first migrated, only Sechem and Hebron. But when Joshua conquered the country there were many walled towns and strong holds. Places which like Bethel, had been but a name in the days of Abraham were now considerable cities. The Hittites were found in the mountains and the Amorites were occupying Hebron, but the tribes of the Canaanites were numerous. The Phœnicians and Philistines fringed the coast line with their settlements but the Canaanites occupied the whole interior. The same decline, however.

RELICS IN THE MOUNDS OF OHIO.—In Oct., 1884, Prof. F. W. Putnam and C. L. Metz explored the Marriott mound adjoining the Turner group. They

found at its center a basin formed from burnt clay, two feet in diameter in which were eleven pottery beads, four shell beads, and five small shells cut so as to be strung as beads. At another place was a burnt space 10x15 feet, and in the ashes were found 600 fragments of pottery, 2000 or 3000 broken and split pieces of bones of animals, 100 clam shells, many small pieces of mica; a bone needle with an eye drilled through it, an ornamented bone awl, many other bone implements and stone objects; 77 thin flakes or flake knives, arrow heads with serrated edges. Besides these, 10 handles were found made from the antlers of deers; these handles had holes in one end designed to receive a knife or a dagger point. With the group of handles was a finely chipped point. A copper plate or breast ornament was also found, which was made from a sheet of roll copper or hammered copper, several places being distinctly laminated. The plate was perforated with two holes as if for a cord by which it could be suspended over the breast. Its dimensions were about 5½ by 9 inches. Under the copper plate were 6 canine teeth of bears; two of them containing pearls counter-sunk into one end, all of them perforated with holes for a cord, showing that they were used as ornaments. A skeleton was also found in the mound with a large number of ornaments near it as follows: on one side of the head, 4 spool-shaped ear ornaments of copper, a dozen large pearl beads, near the neck 4 bear's teeth and 200 pearl beads, in each hand an ear ornament of copper, 1 disk covered with a thin plate of native iron and about 50 pearl beads; upon the breast was a beautifully chipped arrow-head of fine flint. The find is remarkable in that it contained handles of bone with arrow points and knives inserted, and in the fact that the ear ornaments were found so near the head and neck. The relics do not show any high degree of culture, nothing more than ordinary Indians would exhibit. It is probable that the mound was erected by later Indians and not by the later mound-builders.

The mounds explored by Prof. Putnam referred to above have many new and interesting features; in one a peculiar V shaped arrangement of stones, at the bottom of which was a stone cyst and a skeleton. In the same mound were also four stone graves made of large flat lime stones put on edge and covered with flat stones. Under the mound was a large hearth made of stones set on edge, on which was a thick layer of ashes containing burnt bones. This mound was explored in 1885. Subsequent explorations have revealed many other features which are comparatively new.

**SPOOL ORNAMENTS.**—Prof. Putnam's find in Ohio is interesting on account of the discovery of so many spool ornaments. He says, these objects are unquestionably ear ornaments. In the exploration of the Turner group he found the ornaments in pairs, one on each side of the skull, and says that a small terra-cotta figure had a stud-like ornament of large size in each ear. Mr. A. E. Douglass has an idol pipe which represents the ear perforated and filled with these spool ornaments. This idol pipe is represented in the article on Human Faces in Aboriginal Art, (Fig. 9,) but the cut does not show the ear ornaments as much as a side view would. We have in the face which has been wrought out of this block of stone, the Indian features showing that these copper ornaments were used by the Indians. Of this find Prof. Putnam says "Several copper ear ornaments were discovered by some boys in a mound in Liberty township, and that the same people who built the earth-works in Scioto Valley, also built the mounds on the Turner farm in the Miami Valley. It is noticeable that the mound in which the boys found their relics was the

same as the one which was dug into Squier & Davis in 1840, which they called an "Altar Mound." So far as relics are concerned, the boys made a lucky hit. Among the specimens obtained were two copper celts, three or four copper plates, several copper ear ornaments, some of which were covered with a thin layer of iron, and a celt made of meteoric iron. The Turner group was excavated by Dr. Metz in May, 1882. This is a group which was situated in Anderson township near the Little Miami River. It consists of two circular embankments, one on a hill and the other below, connected by a graded way. Several of the mounds in the group contained altars. "One altar contained about two bushels of ornaments made of stone, copper, mica, shells, the canine teeth of bears and other animals, and thousands of pearls. Nearly all of these objects are perforated in various ways for suspension. Several of the copper ornaments are covered with native silver which had been hammered out into thin sheets and folded over the copper. Among these are a bracelet and a bead, and several of the spool shaped objects, which, from discoveries made in other mounds of this group I now regard as ear ornaments. One small copper pendant seems to have been covered with a thin sheet of gold, a portion of which still adheres to the copper, while other bits of it were found in the mass of materials. This is the first time that native gold has been found in the mounds, although hundreds have been explored; and the small amount found here shows that its use was exceptional. The ornaments cut out of copper and mica are very interesting and embrace many forms; among them is a grotesque human profile cut out of a sheet of mica. Several ornaments of this material resemble the heads of animals whose features are emphasized by a red color, while others are in the form of circles and bands. Many of the copper ornament are large and of peculiar shape; others are scrolls, scalloped circles, oval pendants and other forms. There are about thirty of the singular spool-shaped objects, or ear-rings, made of copper like the two described in the last Report. Three large sheets of mica were on this altar, and several finely chipped points of obsidian, chalcedony and chert, were in this mass of materials."

THE OHIO STATE ARCHAEOLOGICAL AND HISTORICAL SOCIETY.—This Society is the outgrowth of the one which was established in 1876. It was reorganized in 1885. Addresses were made by Gen. R. Brinkerhoff, Dr. J. W. Andrews, and Henry B. Curtiss. During that year, Mr. A. A. Graham lectured on the "Origin of the Common Schools of the North-West," and J. P. McLean on the "Fortified Hill in Butler County." Dr. F. O. Hart lectured on "Prehistoric Races of North-Western Ohio," and Gen'l E. B. Finley on the "Mound Builders." During 1886, J. P. McLean lectured on the "Mound Builders." Prof. G. F. Wright on "Archæology and the Glacial Period in Ohio;" Dr. F. O. Hart, "Modern Customs of Savage Origin;" Mrs. Fannie B. Ward on "Pyramids and Burial Cities in the Land of the Montezumas, In February, 1887, Prof. J. P. McLean lectured on "Inscribed Tablets from Ohio Mounds;" and Judge M. F. Force on "Coronado's March." This Society designs to publish a quarterly report which will be free to members but will not be sold.

ARTICLES.—In the *Magazine of American History* The following articles on Indian History and Archæology appeared during the year 1886: Simon Girty, the White Indian, a study in early western history; March of the Spaniards Across Illinois, by Edward G. Mason; The North-West Territory, by J. W.



Andrews. The magazine has been devoted mainly to articles on the war. It is well sustained and attractive in appearance.

The *Iowa Historical Record* for January has an interesting article on "Locating the Government Wagon-Road from Niobrara, Nebraska, to Virginia City, Montana," by N. Levering, Los Angeles, Cal.

Treatment of the American Indians.

The *American Catholic Quarterly Review* for January has interesting articles on "Some Pagan Theories of Revelation," by A. Hilliard Atteridge; "Surnames and their Mutations," by Rt. Rev. Thomas A. Becker, D. D.;

ARCHÆOLOGICAL PAMPHLETS.—The following is a list of the Archæological papers of Col. C. Whittlesey. The list of papers in general is so long that we cannot print it. The number of titles on Archæology is as follows:

1839.—Antiquities of America.—Hesperian, July, No. 4.

1830.—Ancient Earthworks in Ohio, 4th, 7 plates; Smithsonian contribution, pp. 20, Vol. 3., article 7.

1832.—The ancient Miners on Lake Superior. Annals of same. Vol. No. 2 and 3, pp. 8.

1862.—Ancient Mining on the Shores of Lake Superior; 4th, pp. 29. Colored folding map and illustrations; Smithsonian contribution.

1865.—Mound-Builders in Ohio. (Vol. 3.)

1867.—On the Weapons and Military Character of the Mound-Builders. Read March 20, 1861, before the Boston Society of Natural History and in their memoirs. Vol. I., Part 4; 4th, pp. 10; fine plate.

1868.—On the Evidences of Antiquity of man in the United States. A. A. A. cf S.; Chicago Meeting, pp. 16.

1871.—The great Mount in the Etowah Valley; pp. 6 Indianapolis Meeting 1871. Ancient Earthwork of the Cuyhoga Valley; pp. 40; map and nine fine plates. (W. R. H. S., Tract 9.)

1872.—Archæological Frauds, pp. 4. W. R. H. S., Tract 9. Ancient Rock Inscriptions in Ohio Abstract, pp. 8; Indianapolis Meeting A. A. for A. of S. Ancient Rock Inscriptions in Ohio. An ancient Burial Mound in Harden Co., Ohio, and Notes of some rare polished Stone Ornaments, pp. 16; folding plates; (W. R. H. S., Tract 11.)

1876.—Archæological Frauds, pp. 7, illus. (W. R. H. S., Tract 33.) Antiquities of Ohio; Report of the Committee of State Archæological Society, (with Prof. M. C. Reed); 60 pages; many illustrations and plates. Ancient Rock Inscriptions in Ohio, p. 18; Proceedings A. A. A. of S. Detroit Meeting, 1875.

1877.—Ancient Earthworks in Northern Ohio; illustrations; pp. 8. (W. R. H. S., Tract 41.)

1878.—Rock Inscriptions in the United States; pp. 15; (W. R. H. S., Tract 42.)

1879.—The Grave Creek Inscribed Stone, pp. 4; illustrated. (W. R. H. S. Tract 42.)

1880.—Relics of Aboriginal Art and their Ethnological Value; illustrations; pp. 4. (W. R. H. S.; Tract 53.)

1881.—Inscribed Stones in Licking County, Ohio; pp. 5; illustrations. (W. R. H. S., 52.)

1883.—The Cross and the Crucifix, their Various Forms; pp. 4. Metrical Standard of the Mound Builders Deduced by the Method of Even Divisions; pp. 8. (Journal of engineers.)

## NOTES FROM THE FAR EAST.

6

BY PROF. JOHN AVERY.

THE BRAHUI LANGUAGE.—This speech has long been an interesting puzzle to linguists. Like the Basque and the Hungarian in Europe, it stands alone among alien tongues, a mute witness to ethnical movements occurring before the rise of authentic history. The Brahuīs occupy a mountainous district in the north-eastern part of Beluchistan, known as the Khanat of Kelat. They claim—and, so far as we know, rightly—to be the earliest settlers of that region. They are said to have Caucasian features; but in complexion and other physical characteristics they more closely resemble the people of southern India than they do their immediate neighbors, the Beluchis and the Jats. Their language is written in Arabic characters, and its sounds may be accurately represented by that form of the Arabic alphabet which has been adopted by the Hindustani. It was first brought to the notice of scholars in the year 1838 by Major Leech who gave a brief sketch of it, with illustrative specimens.

In 1874 Dr. Bellew added a short grammar and vocabulary, as an appendix to his work "From the Indus to the Tigris." In 1877 Alla Bux, a native of Western India, prepared, with assistance of individuals of the tribe, an outline grammar and some eighty-five pages of Brahui text. In the same year, and under similar circumstances, Capt. Nicolson published a Brahui reader. The first two writers named fell into numerous errors, owing to inadequate opportunities for becoming well versed in the language; the last two furnished much fuller and more authentic material. By a careful study of this the eminent orientalist, Dr. Trumpp, was able to compile what is thus far our best grammar of Brahui, which was presented in the year 1880 to the Academy of Sciences of Munich. The substance of this work has been reproduced in English by Dr. Theodore Duka, and may be found in the *Jour. Roy. Asiat. Soc.*, Vol. XIX, Part I.

The place of the Brahui among the languages of the world has been much discussed, without arriving at a unanimous conclusion. Some scholars connect it with the Aryan group, others with the Koli languages of Central India, others still with the Dravidian tongues of Southern India: Dr. Trumpp's confident opinion is that it belongs with the last named group. In this opinion he is supported by Lassen, and, indeed, by most other eminent authorities. This view, however, is not without difficulties. One of these is the occurrence of aspirates, which characterize Aryan rather than Dravidian speech. Another is, that the Brahui contains a large admixture of Aryan roots. That its vocabulary should have become loaded with words from this source is not surprising, when we consider how closely it has been hemmed in for centuries by languages of the Aryan type. The experience of the Dravidian tongues themselves, in relation to the Sanskrit, is instructive on this point. But some of its correspondences with our family of speech have a character so ancient and radical that so competent a scholar as Dr. Caldwell refuses the Brahui a place in his list of Dravidian tongues; and says, "it seems to be derived from the same source as the Panjabi and Sindhi," but contains a Dravidian element, "which was probably derived from the remnant of some ancient Dravidian race incorporated with the Brahuīs."

In many points, however, the likeness of the Brahui to the South-Indian

group is no less striking. Among these we note: some of its pronouns and numerals—elements of speech less often borrowed; the use of postpositions for prepositions, and the addition of these to an inflectional stem, instead of directly to the root; the absence of a comparison of adjectives by suffixes; the lack of a relative pronoun—except as borrowed; the negative conjugation of the verb; the expression of gender and number for the most part by added words of sex or multitude, rather than by suffixes.

It should be understood, however, that some of these traits are not confined to the Brahui and Dravidian languages, but are repeatedly illustrated in the less known tongues of the northern and eastern border of India; thus, all the features just named, except the inflectional stem, are equally characteristic of the Kachari and Garo of Assam. The inflections of the Brahui are simple, and of the agglutinative type. The suffixes of declension are the same, or nearly so, for singular and plural, and in the latter case follow the sign of number. Adjectives stand before their nouns, and are not inflected for case or number. Only the first three numerals are indigenous, the rest being directly borrowed from other languages—chiefly the Persian. The Brahui has no possessive pronoun of the third person, the genitive of the personal pronoun supplying the former, and a demonstrative pronoun the latter. The verb, which is of the agglutinative order, is well supplied with tenses, but is deficient in modes. It has a passive form, which, however, is sparingly used. The negative conjugation, alluded to above, consists of a negative suffix added to the root, and followed by the terminations of person, mode, or tense. Some irregularities occur in this connection. The language has shown no tendency to develop conjunctions out of its own substance, but has borrowed some from surrounding languages. This preference for participial constructions over a series of dependent clauses is widely characteristic of languages of the same general type.

**THE TAPROBANIAN.**—This is a new Journal devoted to oriental researches. It is edited by Hugh Nevill of the Ceylon Civil Service, and published bi-monthly at the Education Society's Press, Bombay, at the subscription price of 26 shillings. The scope of the Journal is the Natural History, Archæology, Philology, History, etc., of those parts of India occupied by Dravidian populations—and especially, as the name implies, of Ceylon. Since at least one other journal of a similar character, the "Orientalist,"—to say nothing of the infrequently issued Journal of the Ceylon Branch of the Roy. Asiat. Soc.,—is published in that island, it remains to be seen whether both will be adequately supported, though Ceylon does not seem to lack material sufficient to repay much scientific research. Especially is it rich in literary and architectural remains of Buddhism. Judging from the five parts already received, we believe that the *Taprobanian* will be conducted in a scholarly manner, and that we shall be able, from time to time, to glean from it material for these "Notes."

✕ **THE AÇOKA ALPHABET IN CEYLON.**—The editor of the *Taprobanian*, in announcing his purpose to edit all the inscriptions written in this character, which occur in Ceylon, remarks as follows: "In Ceylon we have traces of an earlier state of this alphabet than that used by Açoka; his *ś* is preceded by another form, in all older inscriptions, and in the later ones we find it creeping into use, and at last replacing the other entirely. I argue that this alphabet

was established and in ordinary use in Ceylon long before Açoka sent his emissaries to preach the doctrine of Gautama Buddha. So long before their mission, indeed, that it had in the interval time to change in Magadha, or in whatever country it may have been from which Açoka adopted the letters he used." We may remind our readers that Açoka was king of Magadha—the modern Behar,—and flourished about 250 B. C. He was the most famous of all the Buddhist sovereigns of India; and it was his own son, Mahinda, who first carried the "good law" to Ceylon. The original edicts of this king, found both in Northern and Southern India, supply invaluable information regarding the condition of writing in his time. In Part III. of the same Journal we are told that there are occasional inscriptions of an early date in Ceylon which are to be read from right to left; and some where the first half begins in the center of the space, and reads toward the right, while the second half begins at the same point and reads toward the left. The suggestion based on this curious fact is, that at the time the inscriptions were made both modes of writing were current. It is well known that the Arian Pāli, or northern Açoka writing, ran from right to left, hinting at a recent Semitic origin; while the reverse has hitherto been found true of the Açoka inscriptions of Southern India.

THE LANGUAGE OF THE VEDDAS.—In an earlier number of this Journal (Vol. VII No. 5.) we gave some account of the location and characteristics of this forest tribe of Ceylon, of whose name we have given the most common form, but which is spelled in at least seven different ways. A few words may be added about the language of this rude people, the exact structure and affiliations of which have not yet been decisively ascertained. Prof. Ernst Kuhn holds that Vedda speech is not essentially different from Sinhalese. This latter he regards as being Aryan in base, but greatly modified by contact with the language of an earlier population, and showing no clear traces of influence from the side of Dravidian or Kolh speech. The resemblance of Vedda to Sinhalese is most striking when it is compared with the popular element in the old poetical dialect, known as Elu or Helu. This close relation of Vedda to Sinhalese is generally admitted, but what its wider connections are seems not yet well understood. Professor Max Mueller says (Oriental Congress of 1874) that more than half of Vedda words are corruptions of Sanskrit. Mr. Robert Cust avers (Modern Languages of the East Indies) that the language contains no admixture of the Sanskrit or Pāli. Mr. Edward B. Tylor tells us (Beginnings of Culture) that it is a dialect of Sinhalese—an Aryan tongue—intermixed with Telugu-Dravidian words. Mr. B. F. Harts horne says (Indian Antiquary, Part XCIX) that, "Besides the words which indicate an affinity with Sinhalese, there are others which are allied with Pāli and with Sanskrit, and an important residue of doubtful origin; but it is worthy of remark that from beginning to end the vocabulary is characterized by an absence of any distinctly Dravidian element." The latest writer to express an opinion on this subject is Hugh Nevill (Taprobanian, Vol. I, Part 1.) He says that Vedda is largely identical with the Elu dialect, and that when he addressed a member of the tribe in old Sinhalese, with a Vedda accent, he was perfectly understood. He believes that the grammatical structure of the language is essentially Dravidian, but the vocabulary mostly Aryan; yet the latter, as he thinks, is not Sanskrit or Pāli, but represents a stage of Aryan speech more ancient than that illustrated by the Sanskrit. The underlying Dravidian structure is due, so he says, to emigrants from the cradle of their race in Elam or Chaldea, not to any

special local branch developed in India. Mr. Nevill gives a considerable list of names of animals and other terms used by the Veddas and not by Sinhalese, and attempts to trace their connection with other and more distant languages—some of them of most unlikely relationship. Much of his etymologizing seems very wild, and we are not inclined to follow him. The character of it may be guessed from the two propositions in which he sums up the results of his inquiries: (1.) "English and Latin are of Aryan structure, drenched with a Dravidian vocabulary;" (2.) "Vedda, Sinhalese and Tamil are of Dravidian structure, drenched with an Aryan vocabulary." Such being the discordance of opinion on the part of those who have given most attention to Vedda speech, it seems safest to hold one's judgment in reserve, and wait for further developments.

**ORIGIN OF THE GIPSIES.**—It is generally known that this nomadic people came originally from India; but to which of the numerous modern tribes of that land they are most nearly related has been a matter of doubt. One theory connects them with the Jats, an agricultural population of about five and a half millions, settled mostly in Western India. This theory is supported chiefly by certain accounts of Persian writers. Firdusi, the author of the *Shah-Nama*, who wrote in the 10th century, relates that in the 5th century the Persian king, Bahram Gaur, received from India a company of 12,000 musicians, who bore the name Luris. From these, according to another account, are descended the modern Gipsies of Persia. About 50 years earlier than Firdusi, a historian refers to these same musicians under the name Zutt, which, we are told, is an Arabic corruption of Jatt. The Zutts settled in large numbers on the lower Tigris, and became notorious as robbers and pirates. In the year 834 they were subdued and transported to the northern border of Syria, whence, about 20 years later, they were again carried captive by the Greeks of Byzantium. From this point they ultimately spread over Europe.

The principal objection to this theory is, that the Romany, or Gipsy language, is very unlike that spoken at present by the Jats; and no adequate reason can be assigned why the Gipsies, supposing them to be an offshoot of the Jats, should have exchanged their ancestral speech for that of a quite different Indian people.

Another theory, suggested by Leland and advocated by Grierson, an authority on the languages of Bengal, is that the Gipsies are connected with the Doms, a wandering and predatory tribe of eastern Hindustan, much given to music and dancing. There is certainly a striking resemblance between Romany and Domani, the plural of Dom in the Bhojpuri dialect of the Bihari language. The interchange of the *r* and cerebral *ḍ* is a familiar one. That there are many other points of grammar and vocabulary in which Gipsy betrays a likeness to one or another of the eastern Gaudian dialects has been pointed out by Mr. Grierson in the January number of the *Indian Antiquary*. An English-Gipsy Vocabulary, compiled by Mrs. Grierson, is also appearing in current numbers of the same Journal. Though the Doms are now a despised caste, there is some evidence that they were once stronger and more widely spread over India.

X

## NOTES ON EUROPEAN ARCHÆOLOGY.

BY HENRY PHILLIPS, JR.

THE PLANET-CULTS OF PREHISTORIC DACIA.—Mrs. Sofia von Torma, the possessor of a collection of prehistoric Dacian remains, is preparing a work on the subject in which she endeavors to trace a connection between the Planet-cults of the early dwellers in Dacia and those of the Syrian and Hittite peoples of Asia Minor. The peculiar character of the ornamentation of the stone and clay relics in her possession led her to institute comparisons which have induced her to believe that they were not merely meaningless imitations or barbaric efforts based upon no signification, but that in them lay a deeper sense, and that these remains were those of a people connected on the one hand with Asia and Thrace, and on the other with Etruria. Mrs. von Torma thinks she has found cuneiform symbols identical with those of Accadian sun, moon, and other astronomical objects. In this matter, however, it seems best for the present to "go slow."—[Corr. Blatt Deutsch. Anthropol. Gesell. XVIII, 1.

THE dedication of the New *Museum für Völker-Kunde* in Berlin took place on December 18, 1886, with appropriate ceremonies amidst a large company. *Kultusminister* Von Gosler delivered the opening address, in which he alluded to the length of time that elapsed (14 years) since the first conception of the scheme and its fulfillment, and adverted to the objects that were now thrown open for study and their uses.

On the ground floor are prehistoric collections from Brandenburg and other parts of Europe. Room IV, and VI. contain the results of Dr. Schliemann's explorations.

Africa, America and Oceanica fill the first floor, and the second floor is devoted to India, Asia, &c.

The third floor is intended for anthropological collections of different kinds.

At the last Congress des Sociétés savantes held at the Sorbonne, a number of papers were read on the subject of burial places for incinerated corpses in Gallia before the conquest. M. Jacquinet endeavored to prove that the megalithic monuments of La Nievre showed signs in a cavity on the surface of use as a sacrificial altar; this opinion however was combatted by other of the scientists then present.

At Entrains was lately found a statuette of bronze representing a nude Mercury seated on a rock; it is a copy of a colossal image made by Zenodorus in the first century.

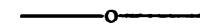
M. REINACH lately communicated to the French Academy a translation of a Greek inscription found in Neo-Phocæa, relating to the erection of a Jewish Synagogue by a rich Jewess named Tation; it is the first information as to the erection of primitive Hebrew places of worship outside of Judea.

AMONG some of the late discoveries at Rome was a bronze coin of Calcs, bearing the galeated head of Athênâ, and on the reverse a cock with the epigraph "Caleno." The find is considered to be of importance, as Calcs ceased its coinage before the present era.

PROF. LANDOIS lately visited the Urn-Burial-place near Westerode and found some interesting remains showing that incineration had been practiced.

MR. AVON NAGEL DEGGENDORF continues his explorations in the Urn-burial-ground at Rössen am Saale, where he has already discovered 60 skeletons, accompanied by bones of beasts, flint implements, weapons, amulets of bone and horn, potsherds, etc.

MR. J. MESTORF has been very successful in his explorations among the Urn-Burial places in Schleswig-Holstein, and has issued a volume containing the results of his work. According to the best authorities the age of the very newest of these remains cannot date to a period nearer than A. D. 500.



### BOOK REVIEWS.

*Development of English Literature and Language*, By ALFRED H. WELCH, A. M., Member of Victoria Institute, Author of *Essentials of English*, etc.

This work is as much a history of the English people as it is of English literature, but is perhaps all the more valuable for that. We have at the beginning, a description of the formative period, primitive Britains, Roman invaders, Saxon settlers, Norman oppressors, Celtic manners, Roman refinements, English and Aryan Anglo Saxons, and with this the cosmogony, burial customs, theology, philosophy, home life of the people. Next a description of the dialects, and the ethnic development of the languages. Then the forming of the literature, the English church, the church of Rome, Mendicant Friars, primitive Oxford, all furnishing the material. Next we have quotations from Beowulf, from Cedmon, and the romance poets; the Saxon chronicles, and the school men such as Dunn-Scotus, Abelard, Erigena, Thomas, Anselm, Thomas Aquinas. Then follows a history of the typical king, Alfred the Great and of Roger Bacon the scholar. The initiative period introduces a new era, beginning with the reign of Edward the Third. The works of this period are as follows: Piers the Plowman. Poetry of Gower, the Prose of Maundeville, and the translation of the Bible by Wycliffe. It closes with Chaucer.

The next period is what is called retrogressive. Robin Hood and the book called *Morte de Arthur*, and the first printer, Caxton, are described. The renaissance follows this, including the works of Marlowe, Sackville history by Raleigh and theology by Hooker and Latimer, philosophy by Bacon, More, Shakespeare, Spencer, belong to this period. Next is the transition period, including Dryden, Congreve, Isaak Walton, Pepys, and the theology of Baxter, the philosophy of Hobbs, Newton and Locke, and the Allegory of Bunyan. The critical period follows next, including such names as Steele, Addison, Defoe, Swift, Pope; the theological writings of Wesley, Whitfield; the poetry of Thompson, Young, and Gray; philosophy by Butler and Hartly; by Hume.

The second transition period follows; Goldsmith, Burns, Cowper are the poets; Gibbon the historian.

The second creative period includes poetry of Campbell, Southey, Coleridge, Keats, Shelley, Scott, Wordsworth, Byron; history by Thomas Arnold and George Grote; theology by Bentham; philosophy by Stewart and Hamilton; science by Sir Charles Lyell.

The last period is called the diffusive, and embraces such writings as Tennyson, the Brownings, Matthew Arnold, Willis, Bryant Holmes, Lowell, Whittier, in poetry; in prose, Froude, Ruskin, Thoreau and Emerson, Hawthorne, Carlyle, George Eliot and Thackeray; in history, Bancroft, Leckey and Motley; in philosophy, J. H. Mill, Whewell; in science, Darwin, Tyndall and Bain.

The plan is a comprehensive one and the division into periods is a great help to the student. No one can read this book without forming a thorough acquaintance with the various authors and their styles. Like all of Griggs pub-

lications the volumes are put into excellent shape for preservation. It is a work which is destined to be used for reference and quotation, as well as for present reading. The style is interesting and the selections good.

"*History of the Pacific States of N. A.*" By HUBERT HOWE BANCROFT, Vols. 6, 7, 8. Central America, 1, 2, 3. History Co. Publishers.

We have already received several of Mr. H. H. Bancroft's works, and expect to review others as they come to us. The books appear in sets; the first five volumes are devoted to archaeology and ethnology and are indispensable to the students of these sciences; no intelligent archaeologist can well do without them. The volumes which follow these are devoted to history. The history of Central America, includes the very regions which have been already treated of, but brings down the record to the very latest date. The foundations of history on the Pacific coast are everywhere, to be discovered in the prehistoric age; but in these Pacific States, especially so. The history begins with the discovery of America, and ends with the establishment of the Republic of the U. S. of Columbia. It includes three periods: first, the early voyages and explorations, second, the conquests of Mexico and Peru, the author devoting all the first and part of the second volume to these events. After this, obscurity settled down upon the region; an obscurity which the diligent historian has penetrated. The interest is not great until one reaches the end of the period, though the information contained in the second volume, and first half of the third is valuable for its encyclopædic character. At the close of the third volume we are brought to a bird's-eye view of the whole country, and find ourselves contemplating familiar scenes. We find that the history of the intervening period is somewhat illuminated by the attractiveness of the earlier and later events. The author has given a description of the modern cities, with the railroads, projected canals and other improvements; and so has thrown a charm into the record. The contrast between the early state and the later condition, is that which exists between the Middle Ages and the Nineteenth century. But we have a long period of decline, between the two." The search for the South Sea continued for two hundred years. Even La Salle and Marquette made their voyages down the Mississippi River with the expectation of reaching this sea; and the name of Indians was applied to all the natives which were seen. There is thus a connection between the history of Central America, and that of the United States. Every intelligent citizen will want to include these volumes in his library.

*The Geographical History of Ohio.*—An address delivered at the Annual Reunion of the Pioneers of the Mahoning Valley at Youngstown, Sept. 10, 1880, by C. C. BALDWIN. Reprinted from Magazine of Western History, Cleveland, Ohio.

*Map and Description of Northwestern Ohio.* by Rev. JOHN HECKEWELDER, 1796. Reprinted from Magazine of Western History, Cleveland, Ohio. 1884.

*Western Reserve and Northern Ohio Historical Society*, Tract No. 61. Surveys of the Public Lands in Ohio, by COL. CHARLES WHITTLESEY, July, 1884. Cleveland, O.. Wm. W. Williams. 145 St. Clair Street.

The Western Reserve and Northern Historical Society has done good service in publishing these pamphlets on the Geographical History of the State. The address by Judge Baldwin brings out the latest information about La Salle as the discoverer of the Ohio River. Joliet's manuscript map, 1674, and that of Franklin, 1689 are relied upon as well as the papers published in Paris which give his conversations. It appears that La Salle and Gallinee were together and had learned about the Ohio River from the Iroquois but were discouraged by them from undertaking to navigate it. In 1689 he got a Shawnee from Ohio to guide him to the River. He left Gallinee and went down as far as the Ohio falls. After some time he made a second attempt on the same river which he left, making a portage to Lake Erie and went toward the North through Lake St. Clair. The geographical history of the Ohio River is plain after 1674. Celeron's map in 1749; D. Anville's, 1755, Evans, 1755, Mitchell's 1755, Fitch's 1785, all have the river laid down correctly.

Mr. Heckewelder's map gives a description of the purchase made by Penn-



sylvania from New York State of the strip of land which runs up between Ohio and New York for the benefit of a communication by water to Lake Erie, and the seven ranges of townships surveyed in 1783 and '86, some of which were sold in New York in 1779. The Muskegon is the territorial line between the Indian territory and the United States. The Cuyahoga River, (Cuyahoga) is the territorial line also. The old mission on the Muskegon and on the Huron River, and the Moravian Mission on the Cuyahoga are laid down. The line of the Western Reserve, a late purchase from the State of Connecticut, is also given. A sketch of the life of Mr. Heckewelder is contained in this little pamphlet.

In the pamphlet by Col. Whittlesey, the work of Thomas Hutchins the geographer is described. He plotted his Jacobstaff on the Pennsylvania line at the North Bank of the Ohio River. Having been one of the Pennsylvania commissioners on the western boundary in 1784, he was familiar with the country from the Ohio to Lake Erie. Hutchins began to number the sections at the south-east corner and numbered north, commencing again at the south line he came out with Sec. No. 36 at the north west corner, but the change to the present system was made by Congress in 1799. A sketch map accompanies this pamphlet which gives the Western Reserve, the Fire Lands, Military Bounty Lands, the seven ranges, the Ohio Company, the Virginia Military Bounty Lands, and the Simms Purchase with their dates. These maps are interesting as they bring before the eye the Geographical history of the State.

*Universalism in America. A History.* By RICHARD EDDY, D. D. Vol. II. 1801-1886. Bibliography. Boston: Universalist Publishing House; 1886.

The previous volume by Richard Eddy, D. D., contained a general history of the demonstration. This is devoted to Bibliography. The New England Convention of 1801 and 1802, the Philadelphia Convention of 1808, the Profession of Belief, the Restorationist Controversy are spoken of. The names of Rev. Abner Kneeland, Calvin Winslow, Archelaus Green, John Murray, Hosea Ballou, Charles Hudson, H. Cobb, appear to be prominent. Universalism in the different states is then dwelt upon, and the volume closes with a description of the schools, colleges and seminaries. The book is well printed and attractive in appearance.

*Legends of the Panjab.* By CAPTAIN R. C. TEMPLE, Bengal Staff Corps, No. XXXI, Vol. III. July 1886. Bombay: Educational Societies Press.

Capt. R. C. Temple is one of the most industrious men in India. His collection of Legends of the Panjab has already grown to three volumes. The original language and the translation are given parallel to one another. These legends are not, if we understand them, very old, but are such as prevail at the present time. Many of them are interesting and bring out the peculiarities of Hindoo thought.

*Studies in General History.* by Mary D. SHELTON; Student's edition, 1885.

Studies in Greek and Roman History, or Studies in General History from 1000 B. C. to 476 A. D.; by Mary D. Sheldon. Boston: D. C. Heath & Co. Publishers, 1886.

Miss Sheldon has introduced a new method of studying history. It consists in giving quotations from contemporary writings and then annexing questions which call out the points, very much as a teacher will set a picture before a pupil and by questioning enable the pupil to analyze and describe the different parts of the picture. It is a novel method and one that might be made very successful. The larger volume on General History as well as the smaller volume on Greek and Roman History contain many valuable quotations from the ancient writers of Egypt, Assyria, which are not familiar to common readers. These quotations are from the Book of the Dead, from the inscriptions of Tiglath Pileser, &c. The quotations would be more valuable if a note were added stating exactly where they came from. Miss Sheldon does not undertake to give dates in ancient history. Events are grouped and dates are uncertain; from 4000 to 2000 with a question mark; from 2000 to 1000, etc. This does not seem definite enough. The quotations are arranged chronologically. It would be better if the periods were shorter, or if not shorter that the con-

temporary events were grouped so that we could get a view of the whole ancient world at particular periods. Some of the engravings are quite choice. They bring out new points. The engraving of the statue of Menmon is an interesting one, and gives a better idea of this statue than any we have seen. We have no doubt that the histories will prove very acceptable and helpful text books to our public schools. They are valuable to archæologists also, as they furnish an epitome of history and contain rare quotations.

*Preliminary Notes of an Analysis of the Mexican Codices and Graven Inscriptions.* By ZELIA NUTTALL. Peabody Museum, Cambridge, Mass. Reprinted from the Proceedings of the A. A. A. S. Vol. XXXV, Buffalo Meeting.

"Familiarity with certain phonetic symbols of frequent recurrence in the picture writing caused me to perceive, somewhat to my astonishment, that identical symbols are reproduced on the so called Calendar Stone, the Sacrificial Stone, and other equally well known monoliths. Through the decipherment of these and an application of the same method to other symbols engraved thereon, I unhesitatingly affirm, even at this early stage of investigation, that these graven monoliths are not what they have hitherto been considered."

*Brigadier General Robert Toombs.*—An address delivered before the Confederate Survivors Association in Augusta, Ga., April 26, 1883, By COL. CHARLES C. JONES JR., L. L. D., President of the Association.

"To his imperious spirit, unused to subjection, and unaccustomed to the suggestions and commands of others, the disciplines and exactions of military life are most irksome. He was suspended from the command of his brigade to await the determination of charges preferred. General Toombs was not in accord with President Davis' administration of public affairs."

*The Geography of Groton, Massachusetts.*—Prepared for the use of the members of the Appalachian Club, on a proposed visit to that town, Saturday, Sept. 18, 1886. By Samuel A. Green, M. D.

This pamphlet is purely geographical. If the mention of the localities could have been attended with a short history so that the naming of them could be understood it would be more valuable to the general reader, though it may not have served any better purpose for the use of the club.

*Antiquities of the State of Ohio.* By HENRY A. SHEPARD. Illustrated: Cincinnati; John C. Yoston & Co. 1887.

This is a quarto about the size of the Smithsonian Contributions, but contains only 139 pages. The cuts are mainly from Squier & Davis, or at least are similar. With the exception of the ancient works at Marietta, which is a handsome steel plate and gives a new view of these interesting works. Mr. Shepard has brought information down to the latest date. He has given the names of recent investigators, and has quoted largely from their reports. The volume is valuable because of the definite information in reference to the various antiquities found in the State and because it is free from all speculations and theories. The works of Ohio are well known, but the recent investigations have thrown considerable light on them. They reveal the fact that there was more than one period of occupation. Still the earliest of the Mound Builders do not seem to be very much in advance of the Indians. The relics which have been exhumed during the last few years, show they are of no higher grade of art than those which were described by Squier & Davis. The question, "Who were the Mound Builders," is no nearer a solution now than then. It is well, however, that the explorations of different Archæologists have been gathered into one volume, and that we can have by the means a resumé of what has been done among the mounds of Ohio.

*The Aztecs, their History, Manners and Customs;* from the French of LUCIEN BIAUT. Authorized translation by J. L. Garnier. Chicago; A. C. McClurg & Co. 1887.

Messrs. McClurg & Co. have presented to the public a very beautiful and interesting volume upon the Ancient History, Character and Customs of the

**Aztecs.** The author, Mr. Lucien Biart, is well informed and has given his ideas in a brief and comprehensive manner. The book contains, first a description of the country, next of the first inhabitants, the Mayas, and a brief description of their works, particularly the ruins at Uxmal and Mayapan. He then takes up question of the origin of the Aztecs. He refers to the method of reckoning time, and gives a description of the various calendars of the Aztecs. The period of their settlement in Mexico, he places at 1355. He next takes the history of the Aztecs and brings it down to the time of the Montezuma and the arrival of Cortez. The several chapters which follow are filled with accounts of the cosmogony and mythology of the Aztecs, a description of their idols, temples, and religious altars, and feasts. The political organizations, social customs, laws, the military institutions, fortifications, the agriculture and commerce, the trades and industrial arts, language, painting, sculpture, are all described briefly. The book contains eighteen or twenty cuts, all of them new and valuable. Probably for general information of the Aztecs and the Antiquities of Mexico, there is no better book than this. It is not an original work drawn from first sources, but a compendium, and is valuable as it presents much in so small a compass.

*"The Aztecs—Their History, Manners and Customs,"* by the French Lucien Biart, authorized translation by J. L. GARNIER. Chicago; A. C. McClurg & Co., 1887.

This book on the antiquities of Mexico, from a Western publishing house, shows that the interest in archaeology is not confined to the older regions, but has penetrated the interior. The book is splendidly printed, and is well illustrated. We have already used several cuts from its pages and shall use others in a future number. The author is well up in the archaeology of Mexico. He has brought out many new and interesting facts. His remarks upon the calendar are eminently judicious and fortunately may be understood, and the reader is not mystified by them. The Cosmogony of the Aztecs is also dwelt upon. The author says, "The Aztecs preserved traditions regarding the creation of the world, a universal flood, the confusion of tongues, and the dispersion of men over the surface of the globe; facts represented in a great number of their hieroglyphic paintings. They related that the first inhabitants of the earth having been drowned by incessant rains, a single man, named Cox-Cox, and a woman called Teocipatsi, had been able, like Noah to save themselves in a boat, and that they had landed near the mountain Colhuacan. In reference to Quetzacoatl the chief divinity of the Aztecs, the author says, "the most contradictory ideas have been current in regard to this divinity, now considered of celestial origin, now regarded as a man who had acquired the immortality of the gods. It is an incontestable fact that Quetzacoatl created a new religion, based on fasting, penitence and virtue. He certainly belonged to a race other than the one he civilized. But what was his country?"

The Aztec Neptune, called Tlaloc, was at the same time, master of Paradise. The most characteristic signs of the idols which represented Tlaloc, are round eyes surrounded with circles like spectacles."

These quotations show that the author of the book is candid and gives both sides of the problem, is carried away with no theory, as to the universality of nature worship, the identity of Bible traditions, the extraneous origin or the autochthonous nature of the Aztec religion, but states the facts, and leaves it for readers to draw their own conclusions. We consider the book one of the most valuable on Mexican Antiquities which has been published.

THE  
*American Antiquarian.*

---

VOL. IX.

JULY, 1887.

No. 4.

---

ON THE USE OF BEEF AND SPIRITUOUS LIQUORS  
IN ANCIENT INDIA.

Those who are familiar only with the ways of thinking and practices of the orthodox Hindoos of the present day, will doubtless feel some surprise at the assertion that the entire national practice in relation to animal food, and especially to beef and intoxicants, has changed since the days of the Vedas,\* and yet, nothing seems to be more certain. The earliest Brahminical settlers in India, were certainly not restrained by any religious sentiment from the use, either of intoxicants or of animal food. The Soma wine was an important part of the libations offered to the gods. It is true that some doubt has been expressed as to the real nature of the Soma beverage, and arguments have been reduced to show that it was not really of an intoxicating character, but the evidence appears to be too strong for any contention of this kind. It was probably the lesson of experience which caused a revulsion in Hindoo feeling on this subject, and the later Vedas, whilst still allowing intoxicants to be used in the sacrifices offered to the gods, prohibit its use for the mere gratification of the senses, and announce drinking as a crime of the blackest dye, equal in its wickedness to the murder of a Brahmin. It is said that the prohibition was first put forth by Sukracharya, the high priest of the Assuras, and was the result of his own remorse for excesses into which drunkenness had led him. Some later writers have invented a curious and rather coarse story to ac-

---

\*The evidence on this point has been accumulated to absolute demonstration by Babn Rajandra-lala Mitra in whose elaborate essays the passages merely mentioned here are given in full with other evidence equally conclusive. See Beef in Ancient India (Journal of the Asiatic Society of Bengal, Vol. XLI, p. 174.) Funeral Ceremonies of the Ancient Hindoos, (ibid Vol. XXXIX, p. 241.) Spirituous Drinks in Ancient India, (ibid Vol. XLII, p. 1.) A Picnic in Ancient India, (ibid XLI, p. 340.)

count for it. The wine-bibbers were also cursed by Krishna, some of whose own relations had proved themselves to be drunkards of the most unruly type. Manu held that a Brahmin who had drunk spirits could only purify himself by suicide; and even when the fiery beverage had been partaken of by accident nothing short of going through the rites of initiation into the caste could purify the offender. The vice was held to be even greater for a woman than a man, and the Brahmin woman who drank an intoxicant was doomed to be born in an after life, a slut, a cow, or a vulture. Manu ordered branding as a punishment for those who drank spirits. But although the general sentiment of law-givers and sages of Hindostan has been on the side of abstinence from all intoxicants, the rule was doubtless broken by many persons in all ages, and even by some of those whom we have cited. Wine drinking was not held to be essentially vicious, although abstinence from it was regarded as a virtue of the highest kind. The trade in spirituous liquors was forbidden to the higher castes, and was left to the Sudras. If from the law-givers we turn to the pictures of ancient life, we find that such great men as Krishna and Arjuna are represented as indulging in drink in the company of their wives, sisters, and daughters. These two heroes are both spoken of as having wine-inflamed eyes; and various particular instances are given.

Thus: Aja, when mourning for the loss of his wife, refers to her as the beloved one of wine-reddened eyes. If his testimony is to be depended upon, the manners of their private drinking parties were by no means over refined, for the ladies are represented as drinking liquor from the mouth of their husband, and he in his turn as partaking of arrack from their mouths. The Puranas condemn the use of intoxicants, but the frequent references to them seems to imply that their use was somewhat common. In certain rites the Brahmins are ordered to make use of spirits. The goddess Durga is represented with all the attributes of drunkenness; she is served with bumpers of strong liquids, and continues to imbibe until her eyes are flaming red, and her laughter wild and tipsy. In the Sakta Tantras we are told that no worship of the Devi is complete, unless its ceremonials are accompanied by fish, flesh, wine, fried grain, and the presence of women. These observances have, as might naturally be expected, degenerated in many cases, into wild orgies of intemperance and unchastity. The other Tantras also enjoin wine drinking, and methods for the preparation of several intoxicants are given. Animal sacrifice is found enjoined in some of the earliest Hindoo rituals, and the fact has been so puzzling to some in modern days, that an attempt has been made to regard the passages in the Vedas as referring to symbolical and not actual sacrifices. The evidence is however too strong for such an explanation; and there are many passages which shew that animal

food, and especially the flesh of the cow—now regarded as a sacred animal—was in common use. It appears to have been considered part of the duty of a host to kill a calf or cow on the arrival of a guest, and so much was this a matter of notoriety that the word for guest actually signifies a cow-killer. Manu allows animal food to be used at all seasons, simply asserting that a portion of it should be offered first to the gods, and then to the spirits, or to the guests. His list of the animals which he considered suitable for human food, included some that are not often used for that purpose: for example, the hedgehog, the porcupine, and the tortoise. All quadrupeds were allowed with the exception of camels. The slaughter of cattle in sacrifices is frequently mentioned in the "Ramayana." Some animals were considered to be especially appropriate for sacrifices to certain deities. Thus: the brown ox to Indra, the white ox to Mitra, and so forth; and particular directions were laid down as to the colors, age, etc., of animals intended as offerings to different gods. There was one ceremony of some considerable extent known as the quinquennium of autumnal sacrifices, which was celebrated for five days in September or October for five years in succession. On these occasions, seventeen five-year old humpless dwarf bulls were consecrated and then set free; whilst seventeen dwarf heifers, after similar ceremony were sacrificed. It is needless to multiply instances of animal sacrifices. The particulars of them are by no means infrequent in the ancient literature of India, and there is no doubt that the animals so slaughtered were intended for food; and in some instances, very precise directions are given as to the persons to whom the different portions of the animal's body were to be distributed. Manu expressly states that any person who having duly performed one of the religious ceremonies, fails to partake of flesh meat, will be punished by transmigration into animal forms for twenty-one generations. Animals, he says, having been created by Brahma for sacrifices, their slaughter at a Vedic ceremonial cannot be regarded as sinful, and that all beasts, birds, trees, and tortoises, destroyed in the carrying out of religious rites are afterwards raised in the scale of creation. The question naturally arises, if the use of intoxicants and of animal food was some 2,000 years ago so common in India as to have left such indelible traces in its religious and secular literature, what have been the causes leading to the entire reversal of Hindoo sentiment on the subject? Whatever may be the practices of particular Hindoos, there can be no doubt whatever that the entire spirit of modern Hindooism is hostile alike to the butcher and the publican. The alteration of feeling, there can be little doubt, is due to Buddhism, which still exerts in this respect a mighty influence, although centuries have elapsed since its adherents were expelled or exterminated from India. The founders of Buddhism uttered no uncertain sound on these points. They prohibited intoxicants

utterly; whilst their command against the destruction of life, naturally and logically involved an entire abstinence from all forms of animal food. The appeal thus made to the humanity and tender feelings of the Hindoo people was one that met a ready and earnest response. The Brahmins, in their life and death struggle against the reforming spirit of Buddhism, found it necessary to imitate the physical virtues of their opponents, and in defiance of the tone and in some cases of the specific teachings of their own sacred book, to inculcate similar lessons of kindness to the animal creation, and of resolute abstinence from intoxicants that had been shewn by experience to be productive of so much evil to their unhappy votaries.

WILLIAM E. A. AXON, M. R. S. L.

### ELEPHANTS IN AMERICA.

In view of the large number of mastodon and mammoth bones and skeletons found in various places of North America, W. B. Scott has composed a short illustrated article, "American Elephant Myths" in the new periodical called *Scribner's Magazine* for April 1887, pp. 469-478. The author gives no decided opinion of his own, whether the elephant or mammoth has existed in America in Columbus' time or since then; but the elephant heads found on basso-relievos in Yucatan are indeed very puzzling for the unbelievers.\* We are sorry to say that Mr. Scott forgot to quote the only author and traveller who ever *personally saw* elephants in the eastern parts of what is now the United States. This is Davyd Ingram, who in 1568-1569 travelled from "the Rio de Minas on the Gulph of Mexico" to Cape Breton in Acadia, and whose *Relacion* is printed in the rare book of Col. Chas. Jennett Weston, Documents connected with the history of South Carolina. London, 1856, 4 vo., (pp. 5-24). The places which he names are unidentifiable, except perhaps Norumbega, and elephants are mentioned among other quadrupeds seen by him, and those who uphold the truthfulness of his record can prove through him that the *present* Indian race, and the explorers of the white race as well, were coeval with the elephants. The animals seen by Davyd Ingram, who was a sailor and travelled with two companions only, were (p. 14): "buffes, beares, horses, kyne, wolves, foxes, deare, *goates*, *sheepe*, hares and conyes;" and the following will give a further idea of his marvelous sights and discoveries (p. 15.):

"This Expedition did alsoe see in those Countreyes a Monstruous

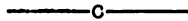
\*If Mr. Scott had known the reputation which von Waldeck enjoyed in his quality as copyist of artistic monuments, he would have put him down as an *embellisher*. Cf. C. Rau, *Palenque Tablet*, pp. 8, sqq.

Beaste twyse as bigge as a Horse and in every proportyon like unto a Horse bothe in mayne, hoofe, heare (hair) and neighinge; savinge yt was small towards the hinder partes like a greyhounde; these Beastes haue twoe teethe or hornes of a foote longe growinge streight furthe of there nostrelles; they are natural Enimyys to the horse. He did alsoe see in that Countrye both Eliphantes and Uunces. He did alsoe see one other Straunge Beaste bigger than a Beare, yt had nether heade nor necke, his eyes and mouthe weare in his breast; this beaste is verye ouglie to beholde and Cowardlie of kynde, yt beareth a very fyne skynne like a Ratte, full of sylver heare," etc. "The 'Canniballes,' who chiefly inhabit between Norumbege and Bariniashe, can be recognized by their teethe, which are like the teethe of dogges."

Another remarkable fact is the discovery of *unicorns* in the country around the middle course of the Red River of Louisiana by the expedition of the French explorer Bénard de la Harpe in 1719. These men joined a party of Nawidishe Indians near the confluence of the Washita (probably the so-called False Washita in the Indian Territory) and the Red river, who were engaged in roasting unicorns. These animals la Harpe describes to be of the size of a common horse, with reddish hair as long as the hair of goats (*il a le poil roux*), legs rather thin and a single horn, six inches long in the middle of the forehead, which does not branch out into prongs; its meat is very palatable. "This discovery," he adds, "agrees well with what M. de Bienville heard from the savages, that upon the upper Washita river unicorns were found." Margry *Découvertes des Français*, Vol. VI, p. 286-287, (1886). Among the ancients, Ctesias, Aristotle and Pliny describe from *hearsay* a one-horned animal as large as a horse; the belief in its existence was increased by the circumstance that the Bible speaks of a horned animal called REÉM, a term falsely rendered by *monokeros* in the Septuagint version, from which it passed into the modern European translations of the Old Testament. This is another instance to show how important it is to possess revised and correct translations of the Bible.

ALBERT S. GATSCHET.

Washington, D. C.



## HERE AND THERE IN MARYLAND.

I have gone rambling many ways after legends and relics of the past, and have found many things to reward my search. Wherever we turn our steps, unless toward the mountains, we will find something of a dreamy past, or what seems so now, behind the slow modern awakening.

There is a massive old house on a hill in the outskirts of



Bladensburg which bears on its chimney side in very distinct figures a date (1734 I think) of the early half of the last century. Nothing very ancient, it is true, by old-world standards; but neither city nor nation were born then, and the wild Indian was not so very far away. We speak of it as so many miles (not really many), from Washington; but possibly we ought to reckon the other way. That which was first may happen to be last also; for time has left few traces on it, and the old mansion can well afford to be passed by. At any rate it is evidently good for another century or two, and so long as it stands it is a record.

There are many others as sturdily self-assertive though usually not in the same precise way. A trip across Prince George County just beyond the Eastern Branch is very likely to reward you with quaint and pleasant surprises. Once, returning from Marlborough, the swamp-blockaded county seat, I took a by-road skirting the open alluvial belts known time out of mind as "The Forest," and climbed, terrace after terrace, the long broad rough ridge which makes a water-shed between the Patuxent and the Anacostia. At the last, or nearly the last ascent, a curve of the road opened out a fine landscape, and at the same time brought me obliquely above and behind a strange bit of architecture which drew one's attention even more quickly and closely. Certainly it did not belong to any period or style but it was broadly effective notwithstanding. From the long high front a vast area of mossy roof sloped nearly to the ground. Immense chimneys rose from the lower corners to the full height of those at the upper ones, and connected to the building only at their bases. A box-hedge of archaic clippings was in the foreground, the remnant probably of some old garden; and the corner of a verandah just showed itself. The whole stood at ease in a sheltered hollow, where a fine grove had sprung up and spread abroad to overshadow it. One day it must have been the very outpost of civilization in this quarter. Indeed the wilderness, though hemmed in on both sides, is but a step further on even now.

I do not mean this for a type of the surviving colonial dwellings. Indeed one could not easily select a more exceptional form. For that matter, the styles of building vary in different parts of the state. This holds good with regard to the older counties. You might look for a long time on the eastern shore before finding that conspicuous cubical barn with the floor-sloping roof and little observatory-like box surmounting all, which so often takes the eye in Prince George. Of the houses themselves the most that can be said is that they seem to carry a certain weight of authority without ornament. A permanent abode and a comfortable or dominant situation (according to taste and means) were no doubt the first things thought of. Sometimes they throw out wings or bend them backward. Sometimes they have a frontage of verandah. But a solid, even ponderous cube

of masonry with chimneys to correspond is the usual body of the structure.

Of course a few frame dwellings have come down, too, from that earlier day; and sturdy log cabins turning a little to picturesque dilapidation. I even recall one old compromise, in wood and plaster which has been holding out these many years a capital "motive" to the artist who will not come. Here you see the round timber evenly laid, there a trellis work of lath, there the smooth white wall; while the sloping roof above is softened out of all sharp outlines and into every tint of moss and decay. Trees overhang it, and the travel of the Marlborough pike goes by.

But the spirit of the past chiefly haunts the stranded arks of villages, which have been given over to a shabby, unbeautiful death in life, that is strangely un-American as well. Once they were stage-road towns; once the arms of the river brought ships to their doors. But the railroads have drawn land traffic another way; and the tilting of strata (so geologists explain) has caused the creek estuaries to fill up and left them hopelessly a-dry. Odd relics and fragments, nothing very precious, linger on in them, because nobody has had vigor enough to introduce any change.

Piscataway, some fifteen miles down the river, is an excellent example. You will find it on a map of the last decade of the seventeenth century, to all appearance at that time a pioneer settlement and trading post. Later, if we may trust the popular tale, it became a place of commerce, receiving goods from England and supplying all the up-river country. Alexandria, (at first Belhaven), Georgetown, Baltimore and Washington came successively into existence; but Piscataway maintained a sort of road-side importance with its five busy inns, its line of shops, its "river," up which vessels came with more and more difficulty. They do not come at all now; nor do the stage coaches. Marshes creep almost up to the door-ways; the wild cactus overruns the fields; when a house falls, it lies fallen. Malaria hangs about, ready to make itself felt. A catholic church and its grave-yard serves as a rallying point for the population, in all but twelve or thirteen families. Some of these may linger on for a long time.

From a haunted and dying village there is but a step to a waste place where a village has been. Tide-water Maryland is, in this sense, truly a land of the dead. It makes one feel uncomfortable to think of any part of a new land thus sown over with memories, and memories only, of the aggregated homes of men. Kent Fort, almost mythical, where Claiborne defied Lord Baltimore to our first civil war; St. Mary's, where the Calverts ruled so long, distributing "baronies" and provincial justice; London on the South River that never dreamed of serious rivalry by little "Baltimore Town" on the Patapsco; Welby at the mouth of Open river where the other limit of the long through-

fare touched the Potomac; all these, and more, have melted away like mist. Hardly one of them has left more than a grave behind it. You need the aid of an old map to find where they even stood.

Still there are ruins extant and, puzzling ones too. On Wye Island, which has had a varied history, with some tragical episodes, they find a tongue of land pierced from the sides by long galleries which meet in a central chamber having rough pillars about it. These are thought to have supported a tower. No one knows who did the excavating or the building. Pirates, and at a later day smugglers were active thereabouts. Claiborne's enterprising partizans had strong-holds not far away. I do not recall any other conjectures; but these will suffice without calling in the Northmen.

Across Eastern Bay from this point there is an old tomb on the lower end of Kent Island which probably marks the first settlement in the limits of the state. The bricks seem to be, in part at least, of English make. The spot is called, for no apparent reason, "Chew's Garden." Assuredly no Chew there was near and no garden; nor has there been for many a day. The neighboring farm still bears the name of Kent Fort Manor, being a part of one of the first manors granted by Lord Baltimore. It went to his brother as a reward for services in suppressing the island insurgents.

On the trip which took us there we visited also the abandoned church at Broad Creek some miles above. There was an owl within the chancel, wild bees had made honey above the vestry room ceiling, and hunters had torn up the floor in getting a fox out of his earth; but the walls were as solid as ever. Outside, great trees had grown up through some of the graves, and the deep gully worn by carriage wheels around the building was turning grassy again. Many of the tombstones were half buried or so weather-worn that you could not read them; but one of comparatively recent look bore very distinctly a date earlier than the middle of the 18th century.

But in Maryland as elsewhere there are many things beside antiquities to make rambles pleasant. So much of the state is given up to the interlocking of land and water, and so much more is given up to rugged hill-country, alternating with fertile valleys, that one has a liberal choice of entertainment. Starting from the heart of the national capital, the lover of downright savage nature with all the dangers of savagery removed, may take himself easily in a brisk morning walk to a belt of wilderness where he may wander for days, if he so choose, and meet no man. All the woodland surprises are there. How mightily the tulip trees lift themselves out of some rich bit of bottom land far above your head; how the holly in places rears itself almost into forestry of the larger sort and spreads abroad, a deep green wood

in winter; how the spring-time laurel rolls nown the hillside in a cascade of blossoms and bud-jewels. But here I am in some danger of wandering from my theme into tempting paths which each reader might very well explore for himself in his own neighborhood. There is no need to say more.

W. H. BABCOCK.

1113 B. St., S. E., Washington, D. C.

## A PREHISTORIC AMPHITHEATRE IN FLORIDA.

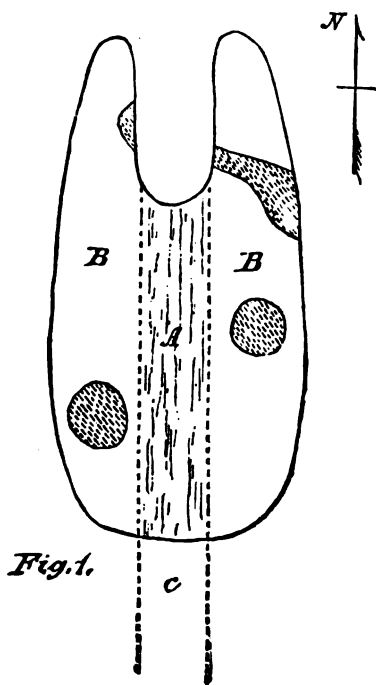
Four years ago I purchased an orange grove near Enterprise, Florida. I wanted a place where I could go and rest, and escape the inclement winds of a Chicago March and April. I bought 25 acres, about seven of orange trees, the rest a dense forest of "high hammock." I observed on the gentle slope in front of the house, the remains of a large "sand mound." I was informed by the venerable Dr. Starke, who cleared the place, that this mound was originally about ten feet high and thirty feet in diameter. He leveled it even with the ground. It was formed of yellow sand. No skeletons or relics (save an implement of shell, like a wedge or axe.) was found in it. Another similar mound still remains in the front, about half a mile to the south-west, on higher ground. There was one other object on the place, which was called by the natives a "sinl." "Sink-holes" are found all over Florida, and are supposed to be formed by a subsidence of the ground. They are sometimes very deep, dry or wet at the bottom, and usually circular. This is one of the objects of interest pointed out to the tourist, and the visitors at the Brock House are shown it as one of the "sights." It is named the "Coliseum," or "Amphitheatre." At first I accepted the popular origin of the "sink," but as I studied it year after year, the conviction was forced upon me that it was the *work of human hands*. Let me fully describe its surroundings. The orange grove in which it lies is on high ground, 40 feet or more above the surface of Lake Monroe, and about one fourth of a mile from it. The ground slopes gently towards the east, at an angle perhaps of 20 degrees. A small rivulet, which rises in a marshy pond on the north side of the grove, runs along my eastern boundary. The "amphitheatre" is located on the eastern side at the bottom of the slope, and *opens* on the rivulet. It is *horse-shoe shaped*. Its western declivity is about 40 feet high, and slopes at an angle of nearly 40 degrees. From this highest declivity it becomes shallower, until it is about 10 feet deep on the rivulet. When I first saw it, the sides were covered with a large growth of live-oak, water-oak, and other trees. The bottom, about 200 feet in diameter from north to south, and 500 from east to west, was a jungle, made up of small

trees, vines, and very large oak, red gum, magnolia and other trees. The largest tree was very nearly three feet in diameter. I had nearly all these trees cut down, leaving the most ornamental. When I had the bottom drained into the rivulet, I found that the floor of the enclosure was formed of two distinct parts. One third, towards the west, was sandy and dry; the other two-thirds boggy. This lower wet portion was caused by a living spring which issued at the base of the western or highest declivity. I imagined there were traces of terraces on this side, which formed about half of the horse-shoe. I have many times been on the celebrated earth-works near Portsmouth, Ohio, and the shape of the two are very similar. I cannot give the extreme length and breadth of this "amphitheatre" from the top, but should judge it to be about 400 by 600 ft.

There was one feature of this depression which first forced upon me the conviction that it was not a natural formation. I allude to the height of the two arms of the horse-shoe, or its extremities, which did not conform to the *natural slope of the land*. I am not a scientific archæologist, but it struck me that like the Portsmouth works, it was an amphitheatre dug into the ground for religious or sacrificial purposes. The two mounds I have mentioned may have been for purposes of *observation*. On the shore of lake Monroe, where the rivulet empties into it, are the remains of one of the largest shell-mounds in the interior of the State. At the base of this mound is a strong salt spring, and twenty rods from it is another salt spring. At this mound was once a large city of the aborigines. The salt springs afforded water in which they cooked their shell and other fish, as the Indians have been known to do within the memory of men now living. All along the shores of lake Monroe and on the banks of the St. John are numerous shell mounds. (They are fully depicted, described and enumerated in *Wyman's "Shell Mounds of Florida."*) The country was densely populated. It had two great centers of population, one on lake Monroe, and the other on lake George and Drayton's Island in the lake. Loudonerre and Fontenado fully sustain this assertion. There is no high land sloping to lake George. No place so well adapted to great religious gatherings, with plenty of food and facilities for cooking it, as near Lake Monroe, and no place so favorable for grand ceremonial works as when the "amphitheatre" exists. I believe the sand (the earth for 40 feet deep is pure yellow sand on the site of this work,) was taken out of this basin by hundreds of workmen and women. It could have been removed in sacks and baskets in a few months. In this way the original Suez canal and the basin of lake Meroe, in Egypt, was removed by thousands

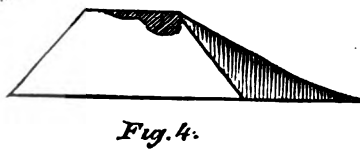
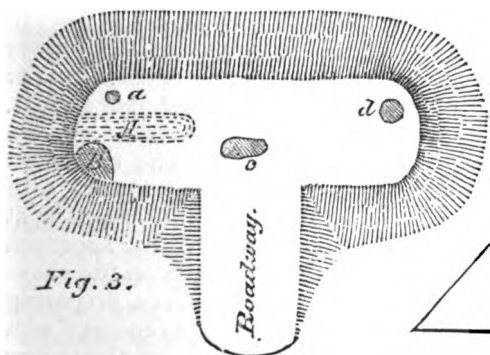
---

We furnish a cut from one of the Smithsonian Reports which illustrates the various shapes of mounds in Florida. The shape of the cross and the horseshoe will be recognized in them, though it is a question whether these were symbolic or merely accidental shapes.—EDITOR.



Mound  
— at —  
PAPYS BAYOU

*Note. The Shaded portions indicate explorations.*



of *fellahs*, and this Florida work was but child's play compared with those immense undertakings.

It may be asked, where was all the sand put that was taken from this Florida excavation? (1.) A portion was doubtless used in forming the sand mound a few hundred feet south-west of the excavation. This mound may have been originally immense. The loose yellow-white sand of Florida is very unstable. Wind and water easily dispose of it. Suppose the mound was originally fifty feet high by one hundred or more in diameter at its base. How much would a thousand years of wind and rain reduce it? It would almost obliterate it, for no sod forms in Florida, and trees and shrubs will not grow on a steep, sandy declivity with anything like the facility which characterizes their growth on other kinds of soil. Large trees are found on shell mounds, but only rarely on sand mounds, and then only when low in altitude. (2.) A very large portion was used in making the two terminal ends of the horse-shoe. These ends or walls were not there originally; the conformation of the ground would form this. (3.) A large proportion of the excavated sand could have been thrown into the stream which runs past the entrance to the amphitheatre especially if thrown in its course during the rainy season. In the dry season this rivulet is small, probably not equalling more than two cubic feet of water, but in the rainy season this volume is immensely increased, perhaps to ten or fifteen feet, forming a swift, powerful torrent, for the fall from the pond on the hill down to lake Monroe, about half a mile, is nearly sixty feet! This large and rapid current of water would carry off and deposit in lake Monroe, all the sand that hundreds of men could throw into it day after day.

Let us imagine the appearance of this excavated amphitheatre during one of the great ceremonial occasions. On the lowest ground, at the entrance, was erected a great altar whereon were offered sacrifices of fruits, grain, animal and probably human sacrifices. It was surrounded by the priests. On the higher ground to the west, were seated the warriors and chiefs. On the terraced sides of this vast enclosure were seated the people, and the sloping side of this basin would accommodate 10,000. A more imposing sight can not be imagined. The enclosure opens to the east, as do all the entrances of such works, with Oriental and Aztec nations. On the observation mounds at varying distances, were placed watchers to observe the approach of parties, friends or foes. The great shell mounds on the shore of lake Monroe, were covered with servitors or slaves, preparing the food for the great multitude. The lake itself was covered with the canoes of the thousands who came by water from the shores of the upper and lower St. John's river, (then called the *Ylacca*. See Fontenado's Narrative.)

Hundreds of times have I called up this vision of the past as I

have rambled around the place, and stood upon the western brow of this magnificent amphitheatre. I hope some accomplished archæologist will sometime make a careful survey and a close study of this great work and its surroundings.

E. M. HALE, M. D.

Chicago, June, 1887.

## THE PUGET SOUND INDIANS.

*Washington Territory.*

**SURROUNDINGS.**—Nearly the whole of Puget Sound is surrounded by mountains, from which rivers and smaller streams are continually flowing into the Sound. Almost all of the country is heavily timbered, there being only a few prairies, and these are mainly so gravelly as to be unfit for much cultivation. Hence the Indians live mainly on the salt water and the streams, using the forests and mountains only as hunting grounds.

**MINERALS.**—The mineral substances which are of practical value to them, besides the soil for cultivation as far as I know are as follows: agate, basalt, chalcedony and jasper for arrow-heads, but *very* seldom however; volcanic rock and beach stones for anchors, hammers, sinkers in fishing and for slinging and tanning stones; black mud of salt marshes for dyeing; clay stones for pipes and rain-stones; clay of a red and clay color for paints; metamorphic rock for axes and adzes; quartzite and sedimentary rock for hammers and whetstones, and slate for knives.

**PLANTS.**—The following fifty-one varieties of native plants are of practical use, besides cultivated plants and grasses for stock:

**Alder.** The wood is used for firewood, and for making dishes, plates, ladles, bailers, and masks, for the building of fish traps and rough houses; the bark is used for medicine and dyeing.

**Barberry.** The bark is used for medicine; the wood for firewood.

**Blackberry.** The berry is used for food, the juice for paint occasionally, the young leaves for tea, and the roots for medicine.

**Cat-tail Rush.** The blades are used for making strings and ropes, one kind of basket and mats, the last of which are among their most useful articles. The head was formerly used in making blankets.

**Red Cedar.** This is the most useful vegetable production of their country, its wood being used for planks for houses, burial enclosures, rails, shingles, shakes, and the like, also for canoes, oars, baby boards, buoys, spinning wheels, boxes, torches, arrow shafts, fish traps, tamahnous sticks, and firewood; the limbs for baskets and ropes; the bark for baskets, mats, sails, infant head protectors, strings, bailers, and when beaten for women's skirts, beds for infants, wadding for guns, napkins, head



bands, blankets, and for gambling purposes; the gum and leaves for medicine, and the roots for making baskets.

Cherry. The bark is used for strings and medicine.

Cottonwood. The wood is used for firewood, the bark for medicine and strings; and the buds for medicine.

Cranberry. The berry is used for food, the juice for paint, and the young leaves for tea.

Crab-apple. The wood is used for wedges, hoes, mauls, mallets and firewood; the fruit for food and the bark for medicine.

Currant. The berry is occasionally used for food.

Dogwood. The wood is manufactured into gambling disks and hollow rattles, and is used for fuel.

Elder. The wood is made into arrow-heads, which are used as play-things; the bark is used for medicine, and the berry for food.

Fir, red. The wood is valued for firewood, lumber, masts, spear handles, spits and oars; the bark is preferred to everything else for fuel, as it is oftentimes three inches, and sometimes six inches thick and pitchy; the pitch wood is good for fire pots, torches and kindling, and for the latter purpose is sometimes sold to the whites; the pitch is used for fastening on arrow and spear-heads, and for cement.

Gooseberry. There are two varieties, both of which are used for food.

Grass—specific name unknown—is used extensively in making and ornamenting baskets. It is found in swamps.

Hazel. The nuts are used as food, the wood for rims to snow shoes, nets and the like, and the bark for strings.

Hemlock. The wood serves for firewood and halibut hooks, the leaves for tea, and the branches for covers in steaming food.

Huckleberry, black, blue and red. The berries of all varieties are used for food, and the juice occasionally for paint.

Ironwood. The wood is used for arrow-shafts, arrow and spear-heads, and mat needles, and the bark for medicine.

Indian Onion. The bulb is eaten.

Kelp. Strings and ropes, especially fish-lines are made from the root.

Kamass. The root is edible.

Laurel. The wood is used in making spoons, vessels and fancy articles; the leaves for medicine.

Liquorice. The root is medicinal.

Maple. The wood is useful for hacklers, mat blocks, paddles, oars, bobbins, seine blocks, combs, fish and duck spear-heads, fish clubs, rails and firewood. The leaves are used in steaming. A smaller variety of maple is also used for firewood.

Moss is used to wrap around wood while steaming it to make bows and the like, the whole being buried in the ground.

Nettle. The fiber is used in making strings similar to twine, one of the strongest strings they have.

Oregon Grape. The root is valuable as a medicine, and the root for dyeing yellow.

Raspberry. The berries are a food and the juice a red paint.

Rose. The roots and leaves serve as a medicine.

Rush. Around kind is used for making mats.

Sallalberry. The berry is used for food.

Salmonberry. The berry and young shoots are eaten.

Skunk Cabbage. The leaves are used for medicine, and the roots occasionally for food.

Strawberry. The berry is gathered for food.

Thimble-cap. The berry and young shoots are eaten.

Spruce. The wood is carved and the leaves are good as a medicine.

Vine Maple. The wood is burned for fuel.

Willow. Occasionally the wood is used as fuel and the bark as strings.

Yew. Paddles, bows and fish clubs of the best kind are made from this wood.

Fern. The roots beaten were formerly an article of food.

Kinnikinic, (Arcto-Staphylos.) The berry is used for food and the leaves are occasionally mixed with tobacco for smoking when this latter article is scarce.

Fire Weed. (Epilobium.) The cotton-like down from the seed was worked into blankets.

Pence-da-num. The stem is used for food and the seeds, when ripe, as a medicine, being peppery.

Plants not identified. The roots of two varieties, the top of one of them and the young shoots of another kind are eaten: the root of another variety is medicinal. One of these is a rush, the equisetum.

BEASTS.—The following sixteen kinds of animals are useful to them:

Bear,—black. The flesh is eaten, the skin is used for robes and quivers, and is sold to the whites, and the teeth are useful as ornaments.

Bear,—grizzly. I have never seen one in this region, or even heard of one being seen by any one within the twelve years which I have been here. One of the Indians has however told me that it has been known to them, that its skin was used for robes, and that it was a strong ta-mah-no-us animal supposed to be used by the medicine men in making people sick.

Beaver. The meat is good for food, the skins for furs, and the teeth are employed in the women's game of gambling.

Cat,—wild. The flesh is eaten and the skins are made into robes.

Dog, common, is of use for hunting, domestic purposes, and the like.

Dog,—wool. The hair was used for making blankets. The breed is now extinct.

Deer. This is probably the most useful wild animal known to them. The flesh is used for food, the skins for robes, strings, fringes, moccasins, cloths, shot-pouches and the like; the fawn skins are sometimes made into buoys for whaling; formerly they made shirts which answered the purposes of shields or suits of armor from the skins; the sinews they use for thread, the hoofs for rattles in religious dance, and the brains in tanning.

Elk. The flesh serves for food, the skins for robes and shield-shirts, and when dressed for strings and clothes, and of the horns they make wedges, chisels and paint. The animal is in most respects used much as the deer, but is not so common by far.

Muskrats. The skins are useful as furs and the teeth in gambling occasionally.

Otter. The flesh is eaten.

Otter, sea. The skins are among the most valuable furs.

Panther. The skins are made into robes and clothes.

Raccoon. The skin is used for furs and the flesh for food.

Sheep or Goat,—Mountain. The flesh is used as food and the horns for dishes and ladles.

Wolf. The skin is used for robes, quivers and caps.

Mink. The skins are useful as furs.

The intestines of several of these animals are used for holding oil, and the bones for various articles, as awls, arrow and spear heads, combs, fasteners and the like.

*Birds.*—There are seventeen kinds which they utilize as follows: The crane, seven varieties of ducks, i. e. the mallard, pin-tail, wood-duck, scoter, teal, diver, and canvas back, the grouse, goose, two varieties of loons, and the pheasant are used as food, while the feathers serve as beds, pillows, and ornamenting the hair at festivals. The Gull also occasionally serves for food for old people, and the feathers for beds, though they are rather coarse.

Eagle-hawk and red-headed woodpecker. The feathers are useful for feathering arrows, and in tamahnous head-bands.

Kingfisher. A piece of the skin where the tail or wing feathers enter it was formerly used in fishing, attached to the line near the hook, as it was superstitiously supposed that it would attract the fish.

*Fish and other marine animals.*—Thirty-six kinds of these are used by them. The following are eaten: Three varieties of clams, two of crabs, two of codfish, and their eggs, the dog-fish when food is very scarce, two kinds of flounders, the halibut, herring, muscles, oyster, porpoise, five varieties of salmon with their eggs,

namely: silver, dog, red, black and hump-backed, the hair seal occasionally, smelt, sea eggs, scallop, skate, sturgeon, trout, whale,

The shells of the abalone, dentalia and sometimes the olivella, were used as money and ornaments.

and cuttle-fish, and one called tse-kwûts by the Twanas.

Large clam shells are of use as drinking dishes.

The skin of the dog-fish is used as a substitute for sand-paper.

The dog-fish, porpoise, hair seal, shark and whale furnish valuable oil, much of which is sold to the whites, and some of which is eaten.

From the skin of the hair seal are made buoys used in whaling and sealing, small sacks, pouches and the like.

Scallop shells are used as rattles in tamahnous.

From the bones of the whale are made war-clubs, and a part of the cod-fish hook, and its sinew is used as thread.

FOOD.—This formerly consisted solely of the spontaneous products of land and water, as roots, berries, game, fish and other marine animals.

*The Fish* eaten are of at least twenty-one different kinds, namely: two varieties of cod-fish, five of salmon, the dog-fish, but only when other food is scarce, smelt, skate, hair-seal, trout, whale, sturgeon, halibut, herring, porpoise and cuttle-fish.

A peculiar looking fish, horned all over, called tse-kwûts by the Twanas, is taken in their waters, and used for food. It does not I think swim, but crawls on the bottom in salt water and is speared where the water is shallow. What I have seen were taken from a muddy bottom. The Twanas do not clean them in their canoes where they catch them, but wait until they go to land, for they believe that if they should throw the entrails into the water, no more such fish would go to that place.

Of these the salmon, halibut, herring and smelt are dried besides being eaten fresh. The herring and smelt are dried whole; the salmon after being split open and the back bone taken out and the halibut after being cut into strips.

The whale, halibut and cuttle-fish seldom visit the waters of the upper Sound, and hence are used by but few of the Indians living there.

Besides the flesh of the dog-fish, porpoise, seal and whale, their oil was formerly eaten, and still is to a small extent.

The eggs of the cod-fish and salmon are a luxury.

Salmon was formerly the staff of life, and a large business of the summer was to dry it for the winter. It is now often salted.

Shell-fish. Ten kinds of these are used for food; comprising four varieties of clams, two of crabs, and one each of oysters, mussels, sea-eggs and scallops, the latter two being found only in Clallam waters.

Clams alone are dried. In doing this Indians first build a large fire, in which they heat a large number of stones, and when

the fire has burned down they remove the brands, and large coals, pour on the clams, perhaps several bushels of them, and cover the whole with several thicknesses of mats. They are then steamed until they are cooked, the shell is then opened thus, and they are taken from the shell, spitted on slender sticks two or three feet long and put above their fires in their houses to dry. When dried they are stored away in baskets. Fish eggs are dried by being placed on small frames made of split sticks or bark and placed over their fires.

There are some kinds of fish in their waters all the year round, though some varieties they do not eat unless food is very scarce, but as long as there any kind of fish with the clams and mussels, which always abound, there is never any need of real suffering for want of food. The only suffering to which they almost voluntarily subject themselves is from improvidence. Sometimes they live from hand to mouth, not having much food beforehand, and so when severely inclement weather in the winter came, the old ones were obliged to go for clams in the cold storms, and this caused some suffering.

*Vegetables*, are the kamass, formerly highly prized, but as it grows only in certain localities, which are not numerous, they seldom use much of it now; the root of the skunk-cabbage steamed; the Indian onion, the peucedamam stem, a kind of rush root, that of an unknown plant, and of the fern were also eaten. The fern roots were dried, laid on a rock, beaten with a bone club into a kind of flour, which was mixed with fish eggs and made into a cake, called by the Clallams skevé u. The young shoots of the thimble cap, salmon berry, and a plant of which I do not know the name, were and still are eaten. Of all these the kamass, Indian onion, and fern cakes, as far as I know, were alone put up for future use.

The blackberry, three varieties of huckleberry—black red and blue—sallal berry, cranberry, gooseberry, hazel-nut salmon berry, strawberry, raspberry, crab apple, currant, elderberry, and a small red berry from the tobacco plant, are all used as food. The blackberry, two varieties of huckleberry, raspberry, and sallal berries, are dried for winter use, the first being made into a kind of cake. Beginning with the young shoots early in the spring, and following on with the berries, the huckleberry hanging on the bushes until they freeze solid in December, together with the roots they had a vegetable diet more or less abundant from early spring to late in the fall, with a little laid up for winter as a luxury.

*Beasts*.—The black bear, deer, elk, otter, wild-cat, raccoon, and occasionally the mountain sheep were used for food: all except the mountain sheep and wild-cat being still used. When a bear is killed, it is very common to invite friends and have a feast in honor of the event. The flesh of the deer, elk and bear are dried.

They were formerly not so much accustomed to this kind of food as they were to fish, as before the introduction of fire arms it was much more difficult to obtain it.

*Birds.*—The cranes, grouse, gull, light and dark loon, pheasant, and seven varieties of ducks are eaten. It is said that the grouse and mallard were not eaten until the whites came, the latter because they fed on snails. None of these were put up for future use, but now ducks are sometimes salted down by the barrel. I am not aware that they ever used any flowers, seeds, insects or worms for food. Large animals were too abundant.

*Salt.*—This was never used until the whites came, and even now they do not use it on much food which whites think they cannot use without it. There is no place in this region where salt could be obtained, except from the salt water of Puget Sound. It seems singular that they did not use it in some way, since there is so much in the water, but they did not even have a word in their language for salt, though they had terms for salty and salt water. Since its introduction by the whites, they have preferred to adopt the English word salt into several of their languages as its name, rather than to give a name derived from any of their words. I have occasionally seen some of them drink salt water with a relish, and it is possible that thus they satisfied the demands of nature. No other spices were used.

At present they use every kind of food possessed by whites; flour and sugar being very largely used, and without which a large share of them think they cannot live. In 1885 the agents reported that the Twanas, Upper Chehalis, Nisqually, Squakson and Clallam Indians obtained 88 per cent. of their subsistence by labor in civilized pursuits, the Lummi, Sanush, Skagit, Snohomish, Muckleshoot, and Port Madison Indians seventy-five per cent, and the Puallups their entire living in the same way.

*Cooking.*—The food which they do not eat raw is cooked in much the same manner as the whites cook it, roasted in the ashes and on spits, boiled, stewed and baked. They formerly steamed large quantities, especially meat at their feasts, and it was done in much the same manner as that described in steaming clams, but green branches of trees were used in connection with the mats. In boiling too they heated stones, and put them with the food to be cooked in their water-tight basets.

*Storing.*—Cultivated roots when stored are commonly cached on or in the ground, covering them with boards and earth, regular cellars being uncommon among the Twanas, Clallams or Squaksons. Formerly they had no food which they needed to keep from freezing, hence they stored what they kept for the winter use in baskets in their houses.

*Drinks.*—I cannot learn that formerly they had any drink except water, unless occasionally they made a tea of the leaves of the blackberry, cranberry or hemlock. At present they are greatly

addicted to the use of tea and coffee. They use but little milk, for while many of them have cows, they think dairying too much trouble.

*Ardent Spirits.*—Drunkenness has always been a besetting sin with Indians, although they do not make, and never have made intoxicating drinks. The law and the gospel have both been used to prevent this and with good effect. On none of the reservations of the upper Sound is there at present much drunkenness, but many of those Indians who live off the reservations are more frequently intoxicated, as there is more temptation for them to drink and less fear of punishment. On the reservation drunkenness is considered a crime and punished as such, which has a good effect.

**MEDICINES.**—I have obtained the following information in regard to their remedies, though it is by no means complete:

Alder-buds. They eat them and afterwards drink salt water as an emetic in case of colds or biliousness.

Alder bark. This they grind in water and drink the infusion as a tonic.

Barberry bark. This is prepared in the same way as the last and used to purify the blood.

Blackberry root is used for colds.

Cedar gum is chewed for tooth-ache.

Cedar leaves are chewed and bound on cuts.

Cherry bark prepared as alder bark and used as a physic and tonic.

Cottonwood bark, thick from the body of the tree, after having been soaked in salt water is ground and used as a medicine.

Cottonwood buds, are also used as medicine.

Crab-apple bark. A cold tea is made from this as a wash for sore eyes.

Elder bark. A tea from it taken internally is used as a remedy for diarrhœa in connection with a steam bath.

Liquorice is used in the treatment of colds.

Oregon grape; the root and bark are used in the same way as alder bark for skin diseases.

Potatoes scraped are used for burns and scalds.

Rose. The bark and roots are employed as a medicine.

Soap and sugar are applied as a salve for boils.

Skunk Cabbage leaves. The Indians heat rocks, throw water over them, place the leaves on them, and get over the steam to strengthen them in case of general debility.

Earth is sometimes bound on bruises.

Cautery. Rheumatism is often treated by takiug a red hot iron or a stick, or a small bunch of cedar bark twisted into the shape of a small stick, setting fire thereto, and burning a hole in the flesh to the bone with it. I have seen one Clallam who has dozens of the scars on him from this mode of treatment.

Blood letting is done by scarrifying the body in various places.

*Narcotics.*—I cannot learn that they ever used tobacco or any thing else in this line until the whites came, though they have since made some pipes quite different from those made by Americans. Nearly all the Indians now use tobacco more or less except a few who have broken off from the habit from principle. The Twanas, however, I believe use it much less than the other triber tribes, it being uncommon to see one with a pipe or cigar in his mouth, while it is common with the other tribes. Some of these pipes will be hereafter figured. When tobacco is scarce they very often mix it with the leaves of the kinnickenick. I have never known of their smoking the pipe of peace.

Skokomish, Wash. Ter.

M. EELS.

## ON GOLD AND SILVER ORNAMENTS FROM MOUNDS OF FLORIDA.\*

During the last few months, four gold and two silver ornaments which were found in the Florida mounds have come into my possession through Mr. F. A. Robinson, who, from his profession of a surveyor, has had opportunity to examine large tracts of ground and who discovered the ornaments, purchased them at the several localities, and has kindly supplied me with all the information in his possession.

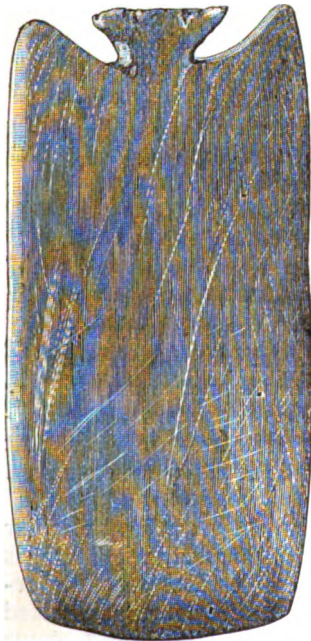


Fig. 1.

In the Smithsonian Report for 1877, p. 298, Dr. Chas. Rau refers to a gold ornament, shaped like a bird's egg, which was dug out of a mound in Florida, and one made of copper alloyed gold, not yet described, is in the possession of A. E. Douglass of New York City.

No. 1, a gold ornament, weighs 75 ½ dwts., has the color of native Georgia gold, and is about 920 fine. Its specific gravity is 17.414. It is 82 mm. long, 38 mm. wide, 35 mm. thick in the center and 1 mm. on the edges. In shape it is like a blunt spear head.

McDonald Station, where this relic was found, is in Orange County,

\*Read at the Buffalo meeting of the American Association for the Advancement of Science.



Florida. The mound was about a quarter of a mile from the railroad, measured 6 feet at the base and 6 feet in height, and on its top a huge live-oak tree was growing. Here, at a depth of  $3\frac{1}{2}$  feet below the surface, the precious ornament had been deposited, together with a small string of bright colored glass beads, blue, white, and brown, and two shell beads of larger size. The position of these on the skeleton showed that they had been worn suspended from the neck as a breast or totemic ornament. In this same mound have been discovered, from time to time, a



Fig. 2.

large quantity of stone celts, broken pottery, arrow heads, and other rude implements of savage life.

This gold ornament, which is of principal interest, has every appearance of having been hammered out and then smoothed by rubbing with a stone. The surface is slightly uneven and covered with scratches, which may be simply the result of wear. At the point of fastening it appears as if it might have been cracked in the hammering.

No 2 weighs 19 dwts., 26.26 grammes. It is a thin, circular ornament about  $\frac{3}{4}$  inches in diameter. Its specific gravity is 17.39, and it is 920 fine. In color it resembles No. 1. The ornamentation on this is more interesting. In the center is a raised portion  $\frac{1}{8}$  inch (3 mm.) above the surrounding level, and about 1 inch (26 mm.) in diameter. The rim is regularly beaten up at intervals into small bead-like dots on the upper surface, and

evenly distributed around the inner portion of the circle are 8 long drop-like projections about 8 to 12 mm. ( $\frac{1}{3}$  to  $\frac{1}{2}$  in.) long, and 5 mm. ( $\frac{1}{5}$  in) across at the widest part. Between each pair of these projections 3 of the small bead-like dots are included, making twenty-four of the small dots in all, arranged evenly from the raised center. Whether these curious forms were symbolical in some way or were simply put on for purposes of ornamentation it is impossible to tell.

If this object were of any but American origin, we might suggest that the centre represents the sun and the dots the 24 hours into which the day is divided.

The raised markings were evidently made by a single blow, a piece of leather or wood being used for the background, and the and the drop-shaped projections were made by pushes of some round-edged tool, and in one case a second and third blow were required to bring the depression to the required depth.

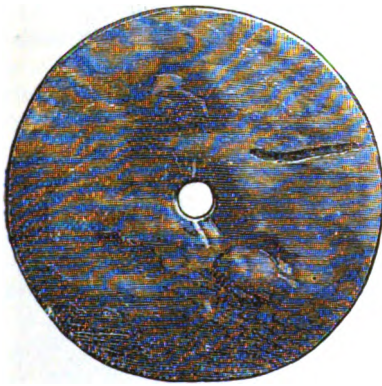


Fig 3.

The round center may have been made by working the same tool in a circular manner, or by moving the block of wood on which the ornament rested during the process.

In several of the little dots near the rim the gold has been broken to the edge, due, doubtless, to the thinness to which it was hammered and the rough method of ornamenting.

This interesting ornament was probably a center piece for a shield or a breast or hair ornament, cemented in place by pitch or resin.

No. 2 was found on the east shore of Lake Butler, Orange Co., Florida, five feet below the surface in a mound fifty feet in diameter at the base and eight feet high. With it was found the silver ornament No. 1.

No. 3 is a circular ear disk, weighing 10 dwts., 14.640 grammes. Its specific gravity is 16.68 and it is 920 fine. In width it is 49 mm., the hole in the center measuring 6 mm. ( $\frac{1}{4}$  inch). In all the space between the central hole and the circumference the surface is slightly raised on the upper side and quite smooth, but on the other side an irregular structure is seen, as if the gold had exfoliated, showing that the ornament had been hammered out of one or more nuggets of gold.

This was found with Indian remains on the west side of Lake Tohopekaliga, in Orange Co., at a depth of four feet, in a mound

measuring 100 feet at the base. Much broken pottery was also met with all through the mound.

No. 4 was found in September, 1885, by Mr. Robinson, at West Apopka, on the west side of Lake Apopka, Sumter Co., Florida, in a mound 100 feet at the base and 5 feet high. A large number of decomposed bones were found in this mound,



Fig. 4.

showing that hundreds of Indians had been buried there, but the bones were in too advanced a stage of decomposition to warrant the assertion that this ornament was found on the body. One skeleton had a stone celt with it, and perhaps this gold ornament belonged to the same body. The triangular silver ornament, No. 5, was found here also. The gold ornament is long, semi-circular in form and tapers somewhat towards the end where it was fastened. It measures 67 mm. in length ( $2\frac{3}{4}$  in.), 22.5 mm. in width and 6.5 mm. in thickness ( $\frac{1}{4}$  inch). Its weight is  $61\frac{1}{2}$  dwts. (94.81 grammes), its specific gravity is 14.433, but its fineness is only 663, as it is alloyed with silver. From its appearance we can quite positively affirm that it is a casting, and that a collar was cut in it and the rounded side smoothed off after it was cast. The under side particularly shows the unevenness of the metal flow, and two cracks in the metal prove either that it must be somewhat crystalline or that it was not properly cooled.

No. 5 is a silver ornament, weighing  $4\frac{3}{4}$  dwts. (6.040 grammes). It is in shape a rude segment of a circle, whose diameter would be about 85 mm. ( $3\frac{1}{2}$  inches), and whose radius would be about 54 mm. ( $2\frac{1}{4}$  inches).

Two rows of small perforations border the one running around the entire edge, and the other from the edge around the hole at the end of the piece by which it was suspended. These perforations are about as large as the punctures of a pin point and number over 100 in all, though part of them have been broken off. They may have been made for purposes of display or may have served as cyelets, by means of which the piece was sewed upon cloth or leather, fibrous hair serving as thread.



Fig. 5.

No. 6 is a circular ear disk of silver, measuring 60 mm. ( $2\frac{1}{2}$  inches). The hole in the center is 7 mm. wide ( $\frac{7}{25}$ ths in.). The same style of ornamentation runs around the edge of the entire

disk, as was described under No. 5. It weighs 20.788 grammes, or  $13\frac{3}{4}$  dwts. This disk was found with No. 2 on the east shore of Lake Butler.

Dr. Rau has very kindly loaned me three silver ornaments, but the information that came with them was very meagre—a



Fig. 6.

simple statement that they were found in some mound or mounds near Tampa, Fla. These are designated as Nos. 7, 8 and 9. No. 7 (No. 62,273, Smith Coll.) was either an ear disk of enormous size or the center of a shield, but Nos. 8 and 9, which are elongated, flat bars, were probably breast ornaments. No. 7 is 99 mm. in diameter ( $3\frac{7}{8}$  inches), and the opening in the center is 8.5 mm. ( $\frac{9}{16}$  inch) in diameter. It is quite flat and weighs 38.07 grammes.

No. 8 (62,271, S. C.) is a long, flat bar with two perforations at one end, by which it was suspended when worn. It is 125 mm. in length ( $5\frac{1}{8}$  inches) and 30 mm. ( $1\frac{1}{8}$  inches) in width, and the edges are cracked from the vigorous hammering it received.



Fig. 8.



Fig. 7.

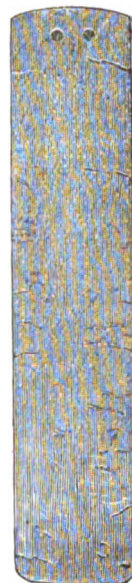


Fig. 9.

No. 9 is also a flat, elongated bar, 119 mm. long (about 5 inches), 42 mm. wide ( $1\frac{5}{8}$  inches) and 4 mm. ( $\frac{1}{16}$  inch) thick, and weighs 140.04 grammes.

In the *AMERICAN ANTIQUARIAN* for May, 1885, p. 143, Mr. A. E. Douglas, in his paper on shell mounds, mentions the reported finding, at the Spruce Creek mound near the Halifax River, of

three circular silver plates, slightly concave and perforated in the center, and measuring 4, 3 and 2 inches respectively in diameter, and, with these, a silver bar and five old Spanish coins. Mr. Douglas regards all of these articles as of modern date. In the *AMERICAN ANTIQUARIAN* journal for March, 1885, p. 80, he speaks of the finding of a copper bead that had discolored the teeth of a skull, and this he supposes to be of ancient origin.

In the 16th report of the Peabody Museum of Archæology, p. 171, Prof. F. W. Putnam mentions the finding of hammered native gold in the Ohio mounds when they were explored by Prof. C. L. Metz, the first authentic find of gold in an ancient mound. A small copper pendant discovered at that time seemed to have been covered with a thin film of gold, portions of which still adhered to it and were found in the mass of the material.

In the account of the expedition of De Soto, by the Gentleman of Elvas, gold ornaments are spoken of as in the possession of an Indian queen about the year 1575.

De Bry's *Brevis Narratio*, Pl. XLI, contains an exaggerated and rather imaginary illustration of the manner in which the natives gathered gold, and the locality he refers to would seem to be somewhere in the northeastern part of Georgia.

In commenting on these gold ornaments, at a recent meeting of the New York Academy of Sciences, Mr. L. E. Chittenden said that a large number of ships laden with gold and silver are known to have been wrecked on the coast of Florida. The following are some of the results of his researches:

In the "*Histoire Notable de la Floride*," by Basanier, Paris, 1586, occurs a passage translated as follows: "There was found among the Indians a great quantity of gold and silver, which, as I learned from themselves, was from the ships which had been wrecked along the coast. They trade in it with one another. What confirms this statement is the fact that along that part of the coast and the cape where the wrecks occur, there is more silver than there is farther north. They said constantly that in the Apalache Mountains there were mines of copper, which I think are really gold."

De Soto was the first to make search in Florida for mines of the precious metals, and in the chronicle of the "Knight of Elvas," who wrote the history of his expedition, there is abundant reference to the use of the precious metals by the Indians. In describing an interview between De Soto and an Indian prisoner from a distant country, the knight says: "His country was governed by a woman whose city was of surprising grandeur; that she drew tribute from all her neighbors, from some in commodities, from others in gold. Whereupon he described the manner in which the gold was taken out, how they smelted and refined it, as if he had seen it done a hundred times or the devil had instructed him, so that those who were experts in the ways of work-



ing mines were certain that he could not have spoken so accurately had he not seen it, and the relation passed for a constant verity from the circumstances which confirmed it.".....At many places on their journey they were told that across the mountains to the northward lay Chisca, rich in mines of gold. At Chiaha, near the northeastern corner of Alabama, "the chief, Acaste, came to offer his services. And when De Soto asked him if he knew any rich and fertile country, he said that farther north he would find the province of Chisca, where they smelted copper and another metal more lively and more perfect; that this metal seemed much more precious than copper, but because of its softness it was not used." This account conformed to what De Soto was told at other places, and he subsequently saw some small axes of copper which they said was mixed with gold.

De Soto made several attempts to reach these mines. Once a party set out to visit a chief who, the Indians said, was a neighbor of the chief of Chisca where the metal was found, which the Governor believed to be gold, but the party failed to reach its destination.

The province of Chisca, as indicated by these extracts, was nearly coincident with the gold fields of northern Georgia. The relation of the Knight of Elvas throughout, gives an impression of the advanced state of civilization among these Indians, so that here, if anywhere, the knowledge of the smelting of the precious metals should have existed.

The omission of all mention of silver in this narrative, however, tends to confirm the suggestion that the material contained in the silver ornaments was obtained from sunken ships, especially if they came from localities near the coast. John Spanke in Hawkins second voyage 1565 says: "It seemeth they had estimation of their gold and silver for it is wrought flat and graven and worn about necks etc."

Col. C. C. Jones ("Antiquities of the Southern Indians," 8vo., New York, 1873, p. 43), says: Gold beads, evidently not European in their manufacture, rudely hammered into round and oval shapes, with holes driven through their central or upper portions, have been found in the Etowah Valley."

Mr. M. F. Stephenson mentions the finding of a gold bead, which had been deposited with a stone ax, a native copper vessel, perforated shells and mica mirrors and other utensils. (Smith. Rep., 1870, p. 380).

Mr. George B. Hanna, U. S. Assayer at the Assay Office, Charlotte, N. C., communicates that the quality of native gold throughout Georgia and North Carolina ranges from 700 to 975 fine. He also states that the Indians inhabiting the State of Georgia were of a higher grade of intelligence than their neighbors, and that in that State natural circumstances favored placer exploitations; adding that where circumstances favorable to the finding

of nuggets exist, the gold is almost uniformly above 900 fine. He thinks that few localities were favorable for the rude miner, but that in the northern belts of Georgia and their extensions into North Carolina, the requisite conditions for accidental finds may have existed. Over this entire area the gold ranges from 875 to 980 fine, and is above 925 at most of the localities.

Mr. D. M. Fox, Superintendent of the Philadelphia Mint, kindly informs me that the average fineness of Georgia gold is 920 and that it has been found as low as 820 and as high as 995. The Spanish gold coins, he says, were 917 fine before 1772.

In fineness all of the gold ornaments found, with the exception of the casting which is heavily alloyed with silver do not vary materially from the native Georgia gold. The casting may belong to a post-Columbian era, but the metals mixed were both pure. The savage, of whatever age he may have been, simply wanted to increase the size of his cherished object, and melted a piece of silver with it to attain this end. It is known that the Peruvian Chiriqui did fine casting, so that we may fairly infer a knowledge of this art among the Indians at the south. That articles made of gold are seldom found in the mounds is unquestioned, for the responses of the Superintendent of the Philadelphia Mint, and of Mr. Geo. B. Hanna, of the Charlotte Mint, show that neither of these gentlemen were cognizant of any such occurrence, and they certainly would know whether any finds had been brought to the mints to be tested or coined.

The facility with which the Indians worked the native copper of the Lake Superior region was never ascribed to European tutorship, nor has it been suggested that the silver ornaments or articles hammered out of meteoric iron which are dug out of the Little Miami mounds might be traced to a foreign source. The gold which is found in the United States of Columbia, has always been regarded as a domestic product, and there seems to be no reason why these articles may not be put in the same category. The fact that gold was rarely found in nuggets or easily worked placers in the southern territory, does not prevent us from concluding that a part of the small quantity found was made into these ornaments, and more highly prized by reason of the rarity of the precious metal. It is possible that some of the ornaments are of post-Columbian origin, but scarcely probable that they are all of this date.

The cupidity of the Indian for gold is strong, and he would eagerly search for it on the slightest indications of its presence. It is not at all likely that the Spaniards gave the Indians gold, for history tells us too plainly that the greedy Spaniards wrested everything of value from the conquered race, and, when nothing was left to satisfy their cruel rapacity, put the Indians to death in cold blood, hoping thus, by the pain of torture, to wring from them a confession of the hiding place of other treasure. It is

barely possible that the wearing of gold by the Spaniards, or at least their anxious inquiry for it, may have set the example for the Indians and, led them to search for the precious metal and apply it to their own rude uses, burying the ornaments they prized so highly, just as the new Zealanders did their coveted heirlooms of jade. If copper was procured in trade from Lake Superior, silver, too, may have been brought with it occasionally, and is it not still more likely that gold was obtained in barter from the much less remote regions of upper Georgia? If the ornaments are really of post-Columbian origin, their presence in the mounds can only be explained by the theory of intrusive burials.

Further reference to this subject has been made by Dr. Daniel G. Brinton: "Historical Magazine," 1st Series, Vol. X., p. 137; in the "Collections of the South Carolina Historical Society," Vol. I., p. 209, Charleston, 1857; in White's "Historical Collections of Georgia," p. 487; "Stephenson's Geology and Mineralogy of Georgia," Atlanta, 1871, p. 208; "Observations on a Gold Ornament from Florida," by Dr. Chas. Rau, Smithsonian Report, 1877, p. 301, and in the narrative of Alvar Núñez Cabeza de Vaca, translated by Buckingham Smith, Washington, 1851.

The Specific Gravity of.	Fineness.	Weight Grammes.
No. 1 is 17.414.....	.920 .....	117.58
No. 2 is 17.39 .....	.920 .....	26.26
No. 3 is 16.68 .....	.920 .....	14.64
No. 4 is 14.443.....	.668 .....	94.81
Silver 5 is 10.23 .....		6.04
" 6 is 10.21 .....		20.788
" 7 is 10.10 .....		38.07
" 8 is 10.29 .....		48.81
" 9 is 10.457.....		140.04

The diversity of weights and the different values of both the gold and silver ornaments, preclude the supposition that they were made from some special denomination of coins, and the exceeding fineness of three of the gold ornaments and all of the silver ones lends some credence to the theory that they are made of native metals.

GEO. F. KUNZ.

New York City.



## Correspondence.

### MOUNDS IN MISSOURI.

*Editor Am. Antiquarian:*

My reason for writing you a few lines is that I have been exploring the mounds in this section more or less, the last three years searching for Mound Builders' relics, not to sell, but to collect for my own satisfaction.

This county is thirty miles long, but owing to the crookedness of the Mississippi, its borders on that river are about seventy-five miles. It is a level country, neither hills nor rocks within fifteen miles of the nearest portion of the county. The soil near the river is sandy; back in the bottoms it is of a black, waxy nature. The western portion of the county is an older formation, a different soil and different timber, mostly a prairie country.

The county has a large number of mounds in size from six inches in height and fifteen feet in diameter to twenty-five feet in height and two hundred feet in diameter. The largest one I know of is about twenty-five feet high, flat, and is one hundred feet broad and one hundred and fifty feet long on top. Some years ago when I was a boy, before it was used so much to keep stock upon in time of overflows, the mound was difficult to ride a horse up its sides, except in one place which seemed to be a graded way.

There is one mound about ten miles above where I live, in an adjoining county, that is of a conical shape about forty feet high and is situated on the edge of a lake that was once the Mississippi river. They probably used this as a look-out station.

South west about two miles from the above described mound, on a dry, sandy ridge, is a number of depressions or holes about two feet in depth and about fifteen feet in diameter. I understand that there is quite a number about ten miles west of those above described. The mounds vary in shape, mostly conical, some oblong. Two that I know of are square or rather rectangular, about seventy-five feet long, thirty or forty feet wide and about ten feet high. I find a few sloping wells from thirty to fifty feet in diameter and ten or fifteen feet deep, having been filled up ten or fifteen feet. That additional depth would furnish them with water during the driest season. In some places they are not excavated to that depth but are large ponds. In one of these ponds I

found the remnant of a dyke running out into the pond, terminating in a small conical mound.

Among the hundreds of mounds in this county, not one that I have seen resembles bird, beast or reptile.

There are hundreds of mounds or elevations from six inches to a foot in height and from fifteen to twenty feet in diameter, sometimes in groups of ten or fifteen, sometimes a single one, most always on the border of some lake, bayou, slough or pond. One of the large groups of mounds has an embankment thrown up enclosing ten or fifteen acres.

The fire beds composed of burned earth, ashes and broken pottery are covered with earth from eighteen inches to four feet in depth, showing that there were inhabitants in this country many years ago. I find them covered to the above depth where the ground was above the floods of the Mississippi, notwithstanding the waters in that stream have been higher during the last few years than was ever known. The fire beds above spoken of are not on the mounds but on the level. I have found some fire beds on mounds. One I found at a depth of three feet, and under that at about the same depth another, showing that the mound was built in layers at different periods of time.

I find some of the mounds have scattered through them small pieces of broken pottery, showing the dirt was taken from around the dwellings.

The burial mounds are frequently from six inches to ten feet in height, but mostly from eighteen inches to four feet in height. Quite a number of burial places are found on level ground. In the mounds, bodies are sometimes buried from one foot to six feet in depth, generally from two to three feet.

From appearances they practiced scaffold burial. I judge this from the position of the bones, many of which are sometimes found missing—sometimes the skull is missing, but generally it and the thigh bones are found lying together, the skull being placed a few inches from the bones. I have often found as many as four skulls together. In one grave I found a mass of bones six inches in depth and eight or ten feet square and but few skulls.

I found, in one, two large pots filled with human bones, also two skulls, two or three of the larger bones, some ribs and a few of the feet, hand and arm bones. One of the pots or urns I preserved together with the bones. The other was destroyed by the man I had digging, while I was on another part of the farm. The bones were packed in the urn very closely and partly covered over with fragments of large vessels, one of the skulls filling the remainder of the open space. The bottom of the urn was about four feet from the surface of the ground, but rather on the outer edge of the burial mound surrounded by a large number of burials in two layers. The burial urn was thirteen inches in depth, sixteen in diameter at its broadest part, the top narrowing to ten inches in diameter.

The pottery is well preserved when found in the sand, but in the clay it is soft and has to be handled with care.

I have about sixteen hundred pieces in all, consisting of pottery, tools, ornaments etc. I have about thirty images of persons, all somewhat different, some representing men. One represents a man on his knees sitting upon his feet, with his arms to his elbows perpendicular with his body, the lower part of the arm at a right angle with the upper, the hands resting against the body at the waist, at the upper part of the stomach. It is painted of a deep yellow color with curved white stripes as broad as one's finger drawn about the body; except there is a breech clout painted a deep red color. One woman is represented with a skirt on and a pappoose or a pack of some kind on her back. Their head-gear is all different one from another. The breast of the woman is made very prominent.

I have a number of bowls, with human heads on them though some are broken off. They are of various shapes.

I have no pottery representing a serpent of any kind. I have some decorated with curved lines and a number of vessels nicely painted in bands and circles and dots of colors, mostly white, red and yellow. The animals represented are the bear, dog, deer, coon and squirrel, the birds are the hawk, owl, duck, goose etc. The frogs and fishes are of various kinds. Pumpkins, gourds, shells, jug and jar stoppers, are found, also earrings and pendants of pottery.

I found in one grave about two tablespoonfuls of red paint that had been ground up. I managed to save it by cutting out a lump of earth with it. I have also found the yellow and red ochre in lump, some chalk and some black substance that I suppose to be powdered coal.

I have one piece of steatite, the kind described by Col. Norris in his "Calumet of the Coteau," page 172, as found in Pipestone County, Minnesota. It is in the shape of a flattened cylinder one and three-fourths inches long, one and one-fourth inches broad and one inch thick, with two knobs in the center making it one and seven-eighths inches broad at that point. A hole is bored through it lengthwise which tapers from five-eighths at one end to four-eighths at the other, the smaller end counter-sunk.

I have seen a fragment of a fire bed made of cut straw and clay mixed. The mortar is spread upon the ground in different thicknesses, as much as four, and one was once found that was six inches thick. The upper surface was smoothed nicely and from long use became burned to a red color. I suppose they used these smooth beds to bake their bread upon.

In a square bowl in a burial mound, was found a Dirt-dauber's nest burned to nearly a red color, with grooves showing that it had been built upon thatch. The following is a description of relics in my possession:

Four whorls, one of clay, one of steatite, one of sandstone and one that is beautiful when the magnifying glass is applied to it, re-

sembling bouquets of flowers. It is a pudding stone of a reddish brown color.

Two pendants made of amethyst, about three-fourths of an inch long and pear-shaped, with a hole drilled through the smaller end. One is a deep purple and the other has a faint purple tinge at the larger end.

One stopper of amethyst, resembling a small glass stopper for a vial, but not perfectly round.

Twenty-five whetstones, mostly for whetting pointed instruments, some concave for whetting their axes. One is a pumice stone used for polishing pointed instruments.

Six tomahawks or grooved axes, one of iron, one of greenstone, one of limestone, three of sandstone. Only one found in this country—a grayish colored one.

Six spades of flint, varying a little in shape and size, made entirely by flaking, three to six inches broad and four to six long.

Twenty-three flint hoes that must have been held in the hand, as I see no way of hafting them. They are from six to eighteen inches long and from three to five inches wide; three that are eight to ten inches long and one to one and one-half wide.

Six hoes four to six inches wide at the broad end, the other narrowing nearly to a point. The hoes above described are from one-half to one inch thick.

Two long axes of greenstone, eleven and one-fourth and twelve and one-fourth inches long, four and one-half and four inches broad, two and one-fourth and two and three-fourths inches thick. The upper part is roughened to enable one to hold more easily in his hand, the blade rubbed down to a smooth edge, weighing seven and one-fourth and eight and ten-sixteenths pounds.

Three axes two to four inches wide and six to eight inches long and one and one-half to two inches thick. One is made of what looks like green slatestone, the others are greenstone.

One copper awl about three and one-half inches long and one-eighth of an inch square, tapering to a point at each end, and seems to have been hammered into shape nearly square. This is the only piece of copper I have heard of being found in the county. in the hundreds of mounds found here.

Thirty skinners or fleshers of the same shape as the axes above described, varying in size from two to six inches in length and from one and one-half to two inches in breadth.

Three skinners of a clear, translucent flint I suppose to be chalcodony, one to one and one-half inches wide and three to three and one-half long.

Ten skinners mostly of flint, one to three inches long and one to one and one-half broad.

Ten hammers, from six ounces to two pounds and fourteen ounces in weight, some of which have seen a great deal of use. They were held in the hand when used.

One smoothing stone, made of what we call cannel coal, a hard, black coal, six inches long, three and one-half inches broad, three

inches thick; polished and the corners and edges rounded off nice and smooth. When first taken out of the mound it was very black and glossy.

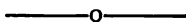
Two smoothing stones of the same material, but small, three inches by three and one-half. One is three-fourths inch thick, the other is in the shape of a triangle and one-half inch thick.

One piece resembles a scythe stone except that it tapers each way, one end being flattened and about three-fourths of an inch broad at the flat end, two in the middle and one-half inch at the other end, one-half inch thick and six inches long; made of fine sandstone.

Beads made of clay; some mica; also a number of discs or paint cups of various sizes; stones for playing games such as pitching quoits; spear and arrow heads of various kinds; drills; chisels; flint knives; arrow knives; pipes of burned clay and carved pipes; sinkers; and a number of other things.

THOMAS BECKWITH.

Charleston, Mo.



## ♣ MOUNDS IN JUNEAU COUNTY WISCONSIN.

*Editor Am. Antiquarian:*

Your card of inquiry as to location of Indian mounds in this section awaits answer. In these notes the ranges are all east of the Principal Meridian to passing one township west of Juneau County.

On Daniel Gee's farm, town of Lisbon, animal mounds and others. Township 16. Range 3 E. Section 17, S. E.  $\frac{1}{4}$ .

The mounds located near Scott & Buckley's former mill site of which I gave you notes, are located, Township 17. R. 3 E. Sec. 19, N. E.  $\frac{1}{4}$ .

I am also informed of a large circular mound beyond this located about T. 17. R. 2 E. Sec. 13, in N. E.  $\frac{1}{4}$  of S. E.  $\frac{1}{4}$ .

Several long rows or lines near Little Yellow River are located, as near as I could make out on the map, Tp. 17. R. 3. Sec. 23, N. E.  $\frac{1}{4}$  of S. E.  $\frac{1}{4}$ .

The one near a swamp shown by Mr. Mason, which was much obliterated was located, T. 17. R. 3. Sec. 29, S. E.  $\frac{1}{4}$ .

I was told to-day of a fine man mound that had been plowed over years ago. Indian boys called it the Big Indian. It was about 30 feet long, in form of a cross, i. e. arms extended on each side, and with head clearly marked. It was located, T. 17. R. 3. Sec. 14, S. W.  $\frac{1}{4}$ .

Between this and the former mounds, on the same side of the Little Yellow River, are some scattered circular mounds.

I have word also of a fine circular mound located, T. 16. R. 3. Sec. 20, S. E.  $\frac{1}{4}$ .

Mr. Joseph Curtis, one of our oldest deer hunters, has reported to me very enthusiastically a set of mounds on the east side of Cran-

berry River, on high lands. He pronounces them very fine indeed. He does not know whether any are animal. They are reached from Necedah. Their location is, T. 19. R. 3. Sec. 23, N. W.  $\frac{1}{4}$ .

The above are all near to streams. Mr. Mason reported to me this morning one that he came across while hunting, which is located near no river but, near a swamp. He did not have time to examine it carefully. He thinks it is a *bird* mound. It is located, T. 17. R. 3. Sec. 5, S. E.  $\frac{1}{4}$ .

These mounds all lie in a breadth of only six miles from east to west, and 18 miles from north to south, yet is probably only a partial list. The parties reporting them have identified the several locations on the sectional county map of Juneau County, and I think you will find them correct to the  $\frac{1}{4}$  section.

A. A. YOUNG.

New Lisbon, Wis., Dec. 22, 1885.

---

## A BIT OF LOCAL INDIAN HISTORY.

*Editor Am. Antiquarian:*

One half mile S. W. of the post village of Ironton, Lehigh County, Penna., is a copious spring. At this place once lived the Shawano Indian, Kolapechka. Of him more further on. Around the spring are picked up from the surface many stone objects, evidence of an Indian village or encampment. A few steps from this fountain is still to be seen in place a part of the rock, about one half of it, in which was once the mortar used by the aborigines to grind their cereals when in this section. That portion of the stone which contained the mortar was unfortunately destroyed several years ago by the farmer owning the property.

Coplay Creek, now a small stream, flows near by. Along its banks are found stone implements made by the Indians. This creek was named "Coplay" in honor of the Shawano chieftain "Kolapechka." A local historian of note appears, however, to think differently. See History of the Lehigh Valley etc., M.S. Henry, Easton, Pa., 1860. On page 300 of his work in a foot note he says; "Coplay is the name of a creek emptying into the Lehigh river near Catasaugua,—west. The proper and original name for this stream is 'Copiechan,' which is an Indian word signifying 'that which runs evenly,' or 'a smooth running stream.'" Not a word does he say of the Sawano; but further on in his book, in another footnote on page 303, he acknowledges great indebtedness to Joseph J. Mickley Esq. of Philadelphia, "for much valuable information of this—Lehigh—county, as likewise by the use of his valuable library, he has been the means of adding many items of an interesting character to the whole publication."

Now, in Mr. Mickley's "Brief Account of the Murders by the Indians in Northampton County, Penna.,"\* page 24, occurs the

\*The county embraced at this time about all the land now contained in Northampton, Lehigh, Carbon, Monroe, Pike, Wayne and Susquehanna counties, and also small parts of Bradford, Wyoming, Luzerne, Schuylkill and Columbia.

following note: "Coplay is a corruption from 'Kolapechka,' which was the name of an Indian, the son of a Shawano chief Paxanosa.† He lived at the head of the creek named after him on friendly terms with the white inhabitants. He was an honest and trustworthy man. Timothy Horsfield‡ employed him on several occasions to carry messages to Governor Hamilton at Philadelphia."

Prof. J. H. Dubbs, who occupies the chair of Archæology and History in Franklin and Marshall College at Lancaster, Penna., says in a recent letter to the writer "that Mr. Mickley was an historical authority of eminence, and was thoroughly familiar with the locality. I may add, however, that in my boyhood the fact that 'Coplay' had resided at the place indicated, was never called in question in the vicinity of Ironton." Both Mr. Mickley and Prof. Dubbs were born and raised in this neighborhood.

In the "Genealogical History of the Race of Balyard" by a descendant, Dr. L. B. Balliet, in preface is found the following: "I am indebted to 'old Auntie Coplay' for reliable information relating to our family prior to her time. She was called by that name from the circumstance that the place she lived on was the home of an old Indian chief named 'Coplay' at the time our forefathers located this tract about the middle of the eighteenth century." There is no proof that the creek was ever called "Copiechan:" but abundant evidence that it was named after "Kolapechkan," and the supposition is that the former name was invented about thirty-five years ago by gentlemen near the present village of Coplay, assisted by antiquarians from Philadelphia, who knew nothing of the real origin of the name, and who, having discovered in the Indian vocabulary that "Copiechan" meant "a fine running stream," took it for granted that the latter must be the original form. This would not be the first occurrence when Indian names were manufactured to order. This, then, settles the matter as to the origin of the word "Coplay."

A. F. BERLIN.

Allentown, Penna.

## THE SILVER FIND IN KENTUCKY.

*Editor Am. Antiquarian:*

In the last number of the ANTIQUARIAN there is an article entitled "A Silver Find" by W. K. Moorehead of Cincinnati, O. It apparently refers to a certain discovery made at the Old Fort, near-

†Paxnas or Paxsinas the father was, so says the Rev. John Heckewelder in his "Indian Nations," a chief of prominence. It appears the Moravian missionaries knew that the Shawano Indians were the most ferocious tribe of all the Indian nations, and because of this sought to gain their friendship, so as not to be molested when passing from one Indian mission to another. After the death of Shellemus, the friend of the whites, who died at Shamokin in 1749, the Moravians were fortunate in gaining the friendship of Paxnas, who proved this by sending his sons to escort a missionary to Bethlehem from Shamokin, where he was in the most perilous situation; the war having just broke out.

‡Horsfield, a druggist, lived in Bethlehem at this time. He was a Justice of the Peace for the then Northampton County. Was appointed a Colonel, and in this capacity had command of the two military companies ranging along the frontier. He was of great service to the government and to the inhabitants on the border.

ly opposite the old mouth of the Scioto River, in Kentucky. In some respects the article is misleading, and as I am personally acquainted with the localities described and have received information concerning the find from first hands and eye-witnesses I have written the following statement of the facts, as far as they could be learned, for your magazine.

Directly opposite Portsmouth, O., there is a "high hill," but there are no mounds upon it. At and below the Old Fort, which is situated about  $1\frac{1}{2}$  miles below the Portsmouth ferry, there are mounds, but none of them exceed five feet in height. About four miles above the ferry there are several mounds, one of which is some eight or ten feet in height, but up to the first of last April this had not been excavated. Neither of the points named are opposite the city, and there are no mounds in the intermediate space.

Two years ago this spring or summer while a farmer was plowing over the northwest wall near the central gateway of the Old Fort, the plow turned out a portion of a human skeleton. Several persons, including one or more boys from Portsmouth, who were present, went to digging, and soon unearthed two—some say three—skeletons or portions of them, including skulls. With the skeletons were found the following relics: one pipe with straight, flat stem, one common plain pipe bowl—both of stone; two stone celts or skinning knives, one of which is nearly square at the upper end with a slight depression on each of its four sides; one stone tube; and a fine polished stone axe which I afterwards saw in the possession of Mr. W. R. Mercer of Cincinnati. There have been a number of axes of this form found in the same region. There was also a number of shell beads and eight or ten shell tubes that were from five to seven inches in length. In the neighborhood these were erroneously called pipe-stems. I have the stone tube and one shell tube, sixty-four shell beads—four of which are of a very odd pattern, the pipe bowl and the two skinning knives. Mr. William Waller of Portsmouth also has a number of the shell beads. These things were not found on the top of the wall, but on its outward slope some two or three feet below.

A day or two after this discovery some boys, including one from Portsmouth whose name I think was Brown and who had previously found the axe mentioned above, concluded to make some further explorations. They commenced digging at the point where the skeletons were found and soon unearthed one or two brass kettles. One of these which I afterwards saw would hold some five or six quarts. Within them were two dozen or more silver crosses of various sizes and designs, a large number of silver buckles—there being at least one hundred scattered over Portsmouth and the surrounding country, several crescent shaped cap-front pieces made of silver and nicely ornamented, jews-harps made of brass, glass beads, and two styles of brass handled pen-knives. There may have been other articles found, but, as the latter find is historical rather than archæological, I did not take enough interest in it to note everything connected therewith. Of



the silver buckles there were at least four forms. In addition to the heart shaped one illustrated in Mr. Moorehead's article, there was another plain heart shaped buckle with the point of the tongue closing at the point of the heart. Of the other two forms, one was nearly square, and the other nearly round. The skeletons and relics found with them were but a few feet from the kettles, but the latter were a foot or two deeper.

While it would be difficult to determine what length of time has elapsed since the skeletons or bodies were placed in the wall of the fort, they certainly have no connection with the two modern kettles and their contents. The latter may possibly have been placed there by some of the early traders say from one hundred to one hundred and fifty years ago, or some Indian may have stolen them from a trader and concealed them.

The history of the Scioto valley states that in the latter part of the last or in the early part of this century there was a Shawnee village just below the old mouth of the Scioto River and that it was removed to the opposite side of the Ohio, and also that some French traders lived with the Indians at the same points, but the statement is given in rather an indefinite way. At the first point named many old copper and silver coins have been found at various times; some were complete, while others were cut into quarters and halves. Most of the coins were European, Spanish and English predominating, and were very much defaced.

Last year in grading the Maysville and Big Sandy Railroad the laborers shaved off a part of the northwest wall in question, which is there ten feet in height. About midway between the central and northern gateways they brought to light a number of copper relics, including tubes and one axe. Some of the pieces of copper were simply hammered out and had no particular design. It is impossible to state the number of pieces contained in this cache, for they were carried away and scattered in different directions. I have a number of stone relics that were taken from different places in this wall at about the same time, the finest of which is a stone pipe bowl representing a human head.

Mr. Moorehead states "that there have been a great many relics found in the banks of the Ohio a little distance above Portsmouth," and describes some interesting ones that he obtained from there. This location is fully described in the *AMERICAN ANTIQUARIAN* for 1886, No. 3 (May), page 167 of vol. 8. Although I have looked over the point mentioned during the past two winters, I have not found any of the bone implements or beads which he describes and am rather inclined to think that they were found on the Fort place 5 miles up the Scioto, on the east bank, for at that point they are frequently found and are well preserved.

T. H. LEWIS.

St. Paul, Minn., June 15, 1887.

## VILLAGE TRAILS AND MOUNDS IN MICHIGAN.

*Editor Am. Antiquarian:*

In response to the questions handed to me by John Brooks, asked by you concerning this part of the state of Michigan in its Indian days, I will answer as follows:

Question 1. Indian Villages. Beginning in the Township of Vernon, Sheawassee County, on Section 6. on the south side of the Sheawassee River was an Indian village called Kechewondaugoneng, and farther down the river was one called Shegemasking, meaning Soft Maple, and about twenty miles north was Chessaneng. The former was the summer residence of Chief Wassee, the principal chief of the Sheawassee bands. On the Looking Glass River in the township of Antrom there was a village of considerable size. Farther down the stream, at what is called DeWitt, in Clinton County, was the Chippewa village of Wabwah-nahseepee; their chief's name Whiteloes, and his son Canorbway. On the N. W. of Section 3 in the Tp. Essen, Clinton County, was the village of the Maketoquets. There was another village of the Maketoquets farther down the Maple River in the township of Lebanon on Section 14, the village of Coooose, occupied by the Chippewas and Ottowas; Coooose was Chief. At or near all these villages were gardens and cornfields. There was quite a stopping place for Chippewas, Fishers, Pottowatomies and Sauks at what is now the city of Owosso; here they had large cornfields.

Question 2. Trails.—There was a trail commencing near the head of the Sheawassee River and following the river bank, called the Fishing Trail. There was another commencing at Kechewondaugoneng, following the same direction of the Sheawassee River, keeping back so as to avoid the bends; this was on the left side of the river and continued on across Section 31 in the township of Venis, thence across townships Caledonia, Owosso, Rush and New Haven in Sheawassee County, thence Chessaneng, St. Charles and Swan Creek in Saginaw, and so on to what is called Saginaw City. Then there was another commencing at Kechewondaugoneng, running west across Sheawassee, Bennington and Scioto Tps. in Sheawassee County, thence following the Looking Glass River through Clinton County. Then there was another commencing at Owosso, at what they called their cornfields, running N. W. through Owosso and Fairfield Tps. in Sheawassee County, and how much further I cannot say.

Question 3. Location of Indian Mounds.—There were mounds and graves near the bank of the Sheawassee River at the village of Kechewondaugoneng, in Tp. 6 N., 4 east, Vernon, also on Sec. 19 in Tp. 7 N., 3 east, Caledonia, also Sec. 13, Owosso, also on the E.  $\frac{1}{2}$ , S. W.  $\frac{1}{4}$ , Sec. 23, Tp. 7 N., Range 1 east, Medelbery, also S. E.  $\frac{1}{4}$  same Section, also Sec. 26 same Tp. and on E. part of S. E.  $\frac{1}{4}$  Sec. 13, Tp. 7 N., R. 2 E., Owosso, also S. W.  $\frac{1}{4}$  Sec. 12, same Tp., also S.  $\frac{1}{2}$  S. W.  $\frac{1}{4}$  Section 2, same Tp., also E.

part S. W.  $\frac{1}{4}$  Sec. 15, Tp. 9 N., 3 E., Chessaneng, Saginaw Co. Cornfields and gardens on Sections 6 and 7 in the Tp. of Vernon, and on Sections 12 and 13 Owosso and on Section 16, Tp. Chessaneng, Saginaw County.

Question No. 4. Effigies.—The mounds described as being on Section 15, Tp. 9 N., 3 E., were effigy mounds. There were also effigy mounds on Section 19, Tp. 7 N., 3 E., Caledonia.

H. H. CARSON.

Owosso, Sheawassee County, Michigan.

*Editor Am. Antiquarian:*

*New York*

Yesterday I opened an Indian grave in the town of Fleming, this county, from which I obtained 1600 colored beads, 660 wampum, 20 crescents and shell ornaments, 70 marginella shells, a *stone paint mortar*, 1 brass and 6 iron bracelets, 2 hammer stones, both nearly the same size,  $3\frac{1}{2}$  in. diameter by 1 in. thick, one of gray and the other of red stone, a knife the handle of which is an image of a soldier embracing his sweetheart, material brass, a broken clay vase, paint, etc.

WM. W. ADAMS.

Mapleton, N. Y., June 8, 1887.

*Editor Am. Antiquarian:*

*British Columbia*

It has been customary with me for a number of years to spend a few of the summer months in Huidah Land. While there I have been shown many a curious document in their possession. Many of them have been carefully preserved through two or three generations. I send you a copy of one in the possession of a Hyganid Southern Alaska Huidah. The person who is the present possessor of the paper is, I believe, the third in descent from the San hert mentioned in it. I send it for publication, not only as a curious document, but because it bears on the earliest correspondence between the Huidahs and Europeans, or Anglo Americans. The following is a copy of the document.

Kyganie, N. W. America, April 25, 1829.

This certifies that the bearer, San hert, a Kyganie chief, has treated me with great hospitality and listened to my statements with attention. May he and his tribe speedily be blessed with the glorious gospel of the blessed God—a system admirably adapted to the exigencies of a dying world.

J. S. Green.

Who J. S. Green was I have been unable to discover. Perhaps he might have been one of the Whalers from Boston, Mass., who visited these coasts early in this century.

JAMES DEANS.

Victoria, B. C.

## Editorial.

Pest. 4. 8.      ✱

### EARLY BOOKS WHICH TREAT OF MOUNDS.

Among the earliest notices of the mounds and mound-builders, we must place the work on the American Indians which was published by Adair, a trader and resident among the Southern Indians for 40 years, 1775; and the work by Wm. Bartram, the Botanist, entitled *Travels through North and South Carolina, East and West Florida*.

As early as 1788 General Washington, in a letter to Gen. Butler expressed a strong desire that inquiry should be made into a matter of so much interest. President Stiles of Yale College thought the mounds were fortifications thrown up by Ferdinand De Soto.

Perhaps the earliest book on the subject was by Caleb Atwater, who wrote *Contributions to the American Antiquarian Society*. He republished a volume in 1833. Governor Dewitt Clinton about 1819 published some notes on mounds in Western New York. Dr. S. P. Hildreth of Marietta, Ohio, contributed facts about the mounds in that city, which were embodied in Hildreth's *History*. Dr. S. G. Morton published his *Crania Americana*, in 1839 giving engravings of mound-builder's skulls. Mr. Josiah Priest published his book on *American Antiquities* in 1833, and gave a description of the discoveries on the Muskingum and Marietta, the works at Cincinnati, a Cavern in Indiana, also the works at Newark and various other places, but filled his book with vagaries and speculations. The most thorough work was done, however, by Mr. E. G. Squier, of Chillicothe, who commenced surveying the mounds in Ohio in 1845 and enlisted Dr. E. H. Davis with him. The two prepared the notable work which was published as the first Smithsonian Contribution in 1848 entitled *The Monuments in the Mississippi Valley*. Mr. Henry R. Schoolcraft, at the time a resident of New York State, made a journey to the West in 1817 and published *Scenes and Adventures in the Ozark Mountains*, (Philadelphia, 1823). In 1820 he was appointed by Gen. Cass to explore the Lake Superior copper region and the upper Mississippi, published a narrative in 1821. *Travels in the central portion of the Mississippi Valley* appeared in 1825, issued after he had been appointed on a commission to treat with the Indians at Chicago. He was appointed in 1822 Indian agent, and lived at Sault St. Marie, was a member of the Legislature of Michigan from 1828-'32. He founded in 1828 the Michigan Hist. Society, and in 1831 the Algic Society.

Two lectures on the Indian languages were delivered to the Society and translated in the French by Duponceau. Narrative of an expedition to Itaska Lake, the source of the Mississippi River appeared in 1834. He communicated in 1842 with the Antiquarian Society of Denmark about a tour to Western Virginia, Ohio, and Canada. In 1845 he made a census and published *Notes on the Iroquois, on Contributions to American History, Antiquities and General Ethnology*, (Albany, 1848.) Under an act of Congress, passed in 1847, he prepared "Historical and Statistical information respecting the history, condition and prospects of the Indian Tribes in the United States, six volumes, folio, 336 plates, (Philadelphia, 1851-57.) He is the author of *The Indian and his Wigwam, or Characteristics of the Red Race*, 1848; *Personal Memoirs of a Residence of Thirty Years with Indian Tribes on the American Frontiers*, (Philadelphia, 1853.) *Algie Researches*, 1839, republished under the title of *The Myth of Hiawatha, and other Old Legends, Mythologic and Allegoric of the North American Indians*, (Philadelphia, 1856); his first two works were republished and combined under the title of *Narrative of an Exploratory Expedition to the Sources of the Mississippi River, etc.*, (Philadelphia, 1854). Albert Gallatin, Sec. of the Treasury, 1800 prepared a book entitled, *Synopsis of the Indian Tribes*. It was published by the Antiquarian Society in 1836, and must be regarded even to this date, one of the most valuable books on the Indian Tribes and Languages ever written. Mr. Gallatin did not treat of the mounds but he was the founder of the American Ethnological Society, which was for a time the only society in the country devoted exclusively to either Ethnology or Archæology and is worthy of honor as one of the pioneer societies of the country, though unfortunately it was suspended in 1871.

A book was published as late as 1853 as the third volume of the *Transactions of the American Ethnological Society*, entitled *Observations on the Creek and Cherokee Indians*. This work contained many allusions to the mounds found in the Gulf States.

Mr. Wm. Pidgeon published in 1858, a book entitled *Traditions of De-Coo-Dah and Antiquarian Researches*. It seems to be based on the researches of Squier & Davis and various scraps of information gained from other sources, but is entirely unreliable. The wood cuts, are numerous, but represent imaginary objects. In 1850, the Regents of the University of New York published a third Annual Report, which contained an account of the Indian Collection in the State Cabinet, and Dr. F.B. Hough's paper on Indian Antiquities, including the enclosures in Jefferson Co. and St. Lawrence Co., N. Y., (Albany, 1850), valuable for its illustrations. Col. Chas. Whittlesey surveyed the mounds in Ohio in 1849 and prepared a monogram which was published in Vol. III of *Smithsonian Contributions*. Dr. I. A. Lapham surveyed the mounds of Wisconsin in 1847, and made a report to the American Antiquarian Society published by the Smithsonian in Vol. VII., entitled *Lapham's An-*

tiquities. In 1841 Mr. John L. Stevens electrified the world by his description of the Antiquities of Central America, *Incidents of Travel in Central America and Yucatan*, 2 vols., 1841. This prepared the way for increased interest in the mounds. In 1857, Nott & Gliddon published their work on the Indigenous Races of the Earth which contained a few allusions to the mound-builder's skulls, but is not especially valuable for its information on the subject. Prichard's *Natural History of Man*, published in 1843, contains description of the Indian Tribes but not of the mound-builders. A work appeared in Germany which was prepared by a Prof. F. W. Assall, a geologist in Penn., but which is really taken almost verbatim from Atwater's book, and which contains the same cuts; it purports to be original but is of no particular value. Mr. W. F. Poole, of the Chicago Library has a copy of the book, and we take the occasion to append the following note which he has kindly sent to us:

"Caleb Atwater, in 1820, contributed to the first volume of the *Transactions of the American Antiquarian Society* (pp. 105-267) "Description of the Antiquities discovered in the State of Ohio and other Western States," with thirteen copper plates showing plainly the western mounds and with numerous wood cuts illustrating objects found in the mounds. Mr. Atwater's "writings," comprising the above and other papers, were issued at Columbus, Ohio, in 1833."

In 1818 Friedrich Wilhelm Assall came to the United States and was head mining officer (Berghauptmann) of the state of Pennsylvania. He traveled through the Northwestern states and made personal observations of the mounds. He returned to Germany in 1823, and his papers came into the hands of F. J. Mone, professor of History and Statistics, in Heidelberg, who edited and enlarged the same by using materials from Caleb Atwater's *Description*; Jefferson's *Notes on Virginia*; De Witt-Clinton's *Antiquities of the Western part of New York*; and Drake's *Pictures of Cincinnati and the Miami Country*. The work was published in German in Heidelberg in 1827, 2 vols. 12 mo. and plates 4to.; with the title "Nachrichten über die früheren einwohner von Nordamerika und ihre denk-mäler gesammelt von Friedrich Wilhelm Assall, Herausgegeben mit einen Borberichte von Franz Joseph Mone, mit einen Atlas von 12 Steintafeln." The plates are reproductions from Atwater's.

Thaddeus Mason Harris in his "Journal of a Tour in the Territory Northwest of the Allegheny Mountains made in the spring of the year 1803," (Boston 1805) gives a description (pp. 147-162) of the Ohio mounds, and follows it up with an account of what earlier writers have said concerning American tumuli (pp. 162-176). Dr. Harris based his description of the mounds on his own observations, and used freely the account of them given by Dr. Manasseh Cutter in a note appended to his charge at the ordination of the Rev. Daniel Story, the first minister at Marietta. He also used the account of Capt. J. Heart, published in the *Columbia Maga-*

zine for April 1887, and the measurements of Gen. Rufus Putnam. H. M. Brackenridge in his "View of Louisiana" 1817, has a chapter (pp. 166-183) on the western mounds."

Stephen Long in his journey to the St. Peters river crossed the Fox river and the Kishwaukee on a line with Geneva and Rockford and discovered mounds at both places. He also published a map, with ancient works located at Prairie Du Chien and at many points on the Mississippi and the Minnesota river. Robert Carver in 1776 also mentions Indian villages, old fortifications, caves, etc., which were discovered on the Wisconsin and upper Mississippi.

*Put. 4. D*

### THE MASTODON IN AMERICA AND THE MOUND BUILDERS.

We have in this number of the ANTIQUARIAN several allusions to the question of the mastodon having been found in America late enough to be known by the aborigines. On this point we add a few words mainly to show what is the status of the discussion. The presence of the mastodon and the mammoth in America is acknowledged and the evidence is accumulating that the date is quite recent. Geologists are not quite sure as to the period in which the mastodon became extinct. It is supposed that the animal belonged to the pre-glacial period, and yet the evidences are that it survived that period. The bare enumeration of the mastodons which have been found in America would prove that they were very common, and the description of the places in which they have been found would show that they were post-glacial. \* "The bones of the mastodon were found in miry clay above a stratum of rock salt on the island Petit Ance, Louisiana, in association with pottery, stone hatchets, cane baskets, etc. These remains were found at a depth of twelve feet." † "A similar association of the bones of the mastodon with fragments of pottery, was found by Prof. Holmes on the banks of the Ashley river, near Charleston S. C." ‡ Sir Charles Lyell states that "in 1845, no less than six of the mastodons were found in Warren Co., New Jersey, six feet below the surface by a farmer who was digging out the rich mud from a pond which he had drained." Prof. Winchell, of Michigan, says that he has "seen the bones of the mastodon and of the elephant imbedded in peat so shallow that he could readily believe the mastodons to have occupied the country during its possession by the Indians." Prof. Shaler says: "almost any swampy bit of ground in Ohio or Kentucky contains traces of the mammoth and mastadon," and at Big Bone Lake "the remains are so well preserved as to seem not much more ancient than the Buffalo bones which are found above them." Prof. Hall, State Geologist of New York says, "of the very recent

\* See "The Epoch of the Mammoth" by James C. Southall,

† Proc. Acad. Nat. Sci. of Phil. July 1858, pp. 178-186, and 1847, p. 125.

‡ Students Elements, p. 160.

|| American Naturalist, Vol. V, pp. 606, 607.

existence of this animal there seems to be no doubt; the marl beds and muck swamps where these remains occur, are the most recent of all superficial accumulations." Sir Chas Lyell says that ¶ "they were exterminated by the Indian hunters, is the first idea presented to the mind of almost every naturalist." Dr. J. C. Warren, speaking of the Newburgh mastodon, says, "it was found just beneath the soil in a small pool of water." The author has seen the bones of a mastodon in a peat swamp near Ashtabula, Ohio, three feet below the surface, surrounded by ashes and the marks of fire; and discovered an arrow-head in the same swamp not thirty feet distant. Prof. John Collett has described the difference between the mastodon and the mammoth, (see Fourteenth Annual Report of Geology and Natural History for Indiana, pages 32 and 33, Plate 3, and Plate 6) and mentions the finding of "parts of over twenty-five mammoths" (*Elephas Americanus*,) and of "thirty individual specimens of the remains of the mastodon," found in marshes, ponds, miry places, old beds of rivers; and says, "their date does not reach beyond the most recent changes of the earth's surface; in fact their existence was so late that the only query is why did they become extinct." He states that a skeleton was discovered in excavating the bed of a canal near Covington, in so good preservation that "when the larger bones were split open, the marrow, still preserved, was used by the bog cutters to grease their boots; and the chunks of sperm-like substance, two and three inches in diameter, occupied the place of the kidney fat." Another was found in Iroquois County, Illinois, "with a mass of fibrous, bark-like material between the ribs, which, when carefully separated, proved to be a crushed mass of herbs and grasses similar to those which still grow in the vicinity."

Prof. Winchell, speaking of the peat beds, says: "These beds are the sites of ancient lake lets slowly filled up with accumulation of sediment; they enclose numerous remains of the mastodon and mammoth. These are sometimes found so near the surface that one could believe them to have been buried within five hundred or a thousand years."†

The mastodon bones found near Tecumseh lay but two and one-half feet beneath the surface. The Adrian mastodon was buried about three feet. Prof. Barton of Pennsylvania discovered the bones of a mastodon at a depth of six feet, and in the stomach of the animal a mass of vegetable matter composed of leaves and branches, among which was a rush belonging to a species now common in Virginia. §

2. It is of some significance that a tradition of this animal existed among the Indians. Mr. Jefferson, in his notes on Virginia mentioned it as existing among the Delawares, and a French officer by the name of Fabri mentions it in a letter to Buffon in 1748 as prevailing among the Canada tribes.

¶ A Second Visit to United States by Lyell, Vol. I, p. 342.

\* See Second Annual Report of Geology for Indiana, 1836, p. 384.

† Annual Scientific Discovery, 1871, p. 239.

§ Epoch of Mammoth p. 168.

|| Epoch of Mammoth, p. 166.



Mr. Stickney, for many years the Indian agent of the United States for the tribes northwest of the Ohio, says: \* "There was a tradition among the Indians of the existence of the mastodon; they were often seen; they fed on the boughs of a species of lime tree, and they did not lie down, but leaned against a tree to sleep."

These traditions may not be entirely reliable as they might refer to the buffalo or elk, as these are the names given by many of the Indians when asked about the big bones. Col. C. Croghan took down a myth about a monster called the "great buffalo," from the band of Iroquois and Wyandots. David Cusic speaks about the "big quis-quis" known by the Iroquois. Elias Johnson speaks of another monster called "Oyahguaharh." William Walker, Indian agent in 1823, brings the tradition from Canada of the "father of oxen." Charlevoix speaks of "a pleasant enough tradition of a "great elk" whose "skin is proof against all sorts of weapons, and he has a sort of arm which comes out of his shoulder, which he uses as we do ours."

3. As to the evidence furnished by the animal figures found in American art something should be said. This evidence is not satisfactory, still there are some things which indicate that the elephant or mastodon was known to the aborigines. There are figures which have been taken for elephants among the monuments of Central America. † Waldeck has described a stucco bas-relief in the palace of Palenque which was "evidently a representation of a proboscidian." \* Figure 1. This is a part of a head dress and contains a trunk and tusk, at the same time a horn above the tusk.



Fig. 1.—ELEPHANT'S HEAD.

Another head-dress is described by Humboldt as found in Mexico. ‡ He says: "It seems hardly possible to suppose that a tapir's snout

\* Nat. Hist. of New York, Part IV, Geology, by W. W. Mather, p. 44.

† See Waldeck's *Recherches sur les Ruines de Palenque*, Pl. XIII.

‡ *Vues des Cordilleras*, plate XV; also *Lenape Stone*, p. 28; *Short's North Americans of Antiquity*, p. 385, fig. 2; See also Bancroft's *Native Races*, Vol. IV, p. 305 figs. 11 and 12.

could have suggested the trunk in the head dress, and we are almost led to infer that the people at Aztalan had received some notice of the elephant from Asia, or that their traditions reach back to the time of the American Elephant."

The elephant trunk as an architectural ornament is common in Central America. It has been disputed whether "it was an elephant's trunk that was intended by the ornament.\* We present a cut of this on page 244. It is a part of the ornament over the doorway in the palace at Uxmal. Another ornament similar to it may be seen in the palace at Labna; †also at Casa Grande, at Zayi, and Casa del Gobernador, Casa de Monjas, at Uxmal. ‡

4. We now come to the question as to the mastodon being known to the Mound Builders. On this point the evidence is very uncertain. The fact that mastodons have been found in association with Mound Builder's relics and with human remains near by would render it only probable but somehow the relics which are brought forth as proofs have been regarded by many as manifest frauds manufactured with a theory in mind and so a cloud of doubt has been thrown over the whole subject. These relics taken in the order of their discovery are as follows:

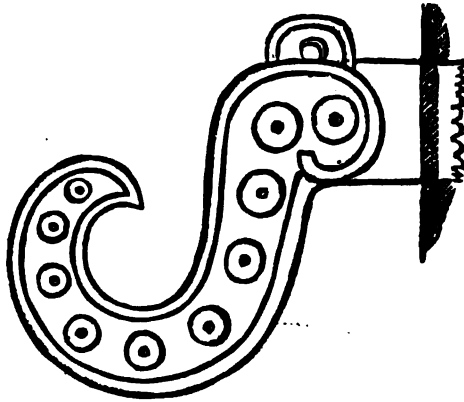


Fig. 2.—ELEPHANT'S TRUNK.

1, the Davenport tablet; 2, the so-called Elephant pipes 3, the Lenape stone; 4, the Larkin stone a flat piece of native copper found near Red House Valley in the Allegheny mountains. In reference to the last there is no doubt that it is a fraud. It has been described by Dr. Frederick Larkin of Randolph, N. Y., in the following words: "It was a flat piece of native copper six inches in length by four in width, artistically wrought, with the form of an elephant represented *in harness*, engraved upon it, and a sort of breast collar with tugs on either side, which extended past the hips." This author says, "my theory that the prehistoric races used to some extent the great American elephant or mastodon, I believe is new, and no doubt will be considered visionary by many readers, and more especially by prominent archæologists." The author also claims "The earthworks are indeed constructed on a gigantic scale, but they were erected by a people who worked the mastodon and who doubled their teams." This author has given a cut which is entitled,

\* See Allen's Prehistoric World, p. 590.

† See Short's North Americans of Antiquity, pp. 353, 354, 395. Allen's Prehistoric World, p. 632. Bancroft's Native Races, Vol. IV, pp. 263, 214, 217.

‡ Ancient Man in America, (1) p. 19, (2) intro, (3) p. 142, fig. 15.

"Engraving on bone found in a mound," yet it is an almost exact fac-simile of the bone taken from the cave at Madelaine by M. Lartet.

The Lenape stone was found on a farm near Doyleston, Bucks County, Pennsylvania. There were two parts to the stone: one was found in 1872, the other in 1881; but was afterwards sold to Henry Paxon, a youth of nineteen, who had a fancy for collecting Indian antiquities, in whose possession it still remains. Mr. H. C. Mercer describes the inscription in the following words: \* "It is unquestionably a picture of combat between savages and the hairy mammoth; the combat



Fig. 3.—ELEPHANT PIPE.

we might imagine takes place on the confines of a forest, and if we may judge from an upward inclination of the foreground on the right, at the base of a hillside. The monster, angry, and with erect tail approaches the forest in which through the pine trunks are seen the wigwams of an Indian village. In the sky, overhead and as if presiding over the event, are ranged the powers of heaven; forked lightning flashes through the tree-tops and from between a planet and the crescent moon, beyond which we seem to see a constellation and two stars, the sun's face looks down upon the scene."

In reference to the Davenport tablets and pipes much has already been written. Archæologists differ among themselves as to their genuineness. We do not propose to discuss that question now. The question before us is whether the mastodon or mammoth were late enough in history for the Mound Builders to come into contact with them. On this point the Davenport finds furnish no proof. One of the tablets, to be sure, has animal figures upon it, some of which may be said to resemble elephants or tapirs or hogs, but the figures are very rude and one can hardly tell what they represent. They furnish no evidence of the mastodon being known to the Mound Builders, even if the tablet is genuine. The

---

\* See the Lenape Stone, p. 5.

elephant pipes, to some, furnish better argument. It is said that the people who carved these must have known something about the elephants. It is claimed however by the majority of the writers who favor the genuineness of these tablets and pipes, that this knowledge was derived from memory or tradition; that the people emigrated from the Asiatic continent and brought with them a knowledge of the elephant. In confirmation of this it is said that the phonetic alphabet was known to the Mound Builders, and the letters on the tablets are referred to as proof of this. There *are* Arabic numerals on the tablet. If these numerals were known to the Mound Builders then we should conclude that their migration was subsequent to the rise of the arabic literature and as a result the tablets could not be older than that.

We give a cut of one of the elephant pipes and ask the question was it intended to represent the mastodon or the Asiatic elephant.

There is nothing improbable in the supposition that the Mound Builders were familiar with the mastodon but somehow every relic which has been found goes contrary to the supposition, for the theory on which their fabrication has been based seems to have been that the elephant was known, and the mastodon was a very familiar object. We await further discoveries. Possibly a genuine tablet with a hairy mammoth inscribed upon it may be found. When this occurs we shall believe that the people were contemporaneous with the mastodon. The trend of discovery and of thought is at present in the direction of proving that the Mound Builders were very recent. There is a mystery about the subject which has not been cleared up. The geological evidence favors the recent existence of the mammoth but archæology at present is without any very definite evidence except as we take the figures found in Mexico and Central America as proof. We presume that archæologists will investigate the subject and will reach some satisfactory conclusion in reference to it.

*skt. 4. 8.*

## SOLOMON'S TEMPLE AND PHœNICIAN ARCHITECTURE.

An interesting paper on Jewish and Phœnician art may be found in the transactions of the Victoria Institute, Volume XXI, No. 81, from the pen of Rev. J. Leslie Porter, president of Queen's College, Belfast, Ireland, with comments on the same from such distinguished archæologists as Sir. Trelawney Saunders and Mr. W. St. Chad Boscawen and others. The author takes the position that the architecture of Solomon's temple was borrowed from the Phœnicians, and that the pillars Jachin and Boaz were Phœnician obelisks. He also takes the ground that the tombs which were erected in the neighborhood of Jerusalem were constructed after Phœnician models, and the stones which formed the foundation of the temple were constructed after the Cyclopean order. He main-

tains that the plan was the same as the one found in Baalbek and Palmyra, the eastern outpost of Phœnician commerce, and that the same general plan was found in the Acropolis of Athens; in the Acro corrinthus of Corinth; In the Larissa of Argos; in Tir-yus and in Mycenæ; also in the Cadmeia of Thebes, which long retained the name of Cadmus its Phœnician founder. These conclusions by the distinguished author and explorer, Dr. Porter, seem to us, however, based on too broad a generalization and lack the specific and definite statements in detail, which are necessary to show any absolute analogies, or prove the real origin. The "spacious open court," the "massive encircling wall," the "commanding site," and the "central shrine," are indeed found in all these temples, but they are also found in palaces and temples of Assyria; in the pagodas and temples of the Hindoos, and in fact in the palaces and courts of the Chinese and all eastern nations.

In the discussion which followed, we notice that the distinguished archæologists, whose names we have given, differed from the author of the paper on many points, and that they both agreed in ascribing the Phœnician architecture to an eastern origin, holding that the Phœnicians were not inventors of any style of architecture but were rather borrowers and transmitters.

Mr. Saunders says that "although Dr. Porter ascribes the plan of Solomon's temple to the Phœnicians, nevertheless, when he seeks for examples with which he can compare the famous pillars Jachin and Boaz he draws the comparison not with anything in Phœnicia but with the pillars of the famous ruins Persepolis on the borders of Asyro-Babylonia.

"Mr. Ferguson drew a plan of Solomon's temple and he distinctly looks for the primitive designs in Assyria. Mr. Ferguson also makes the pillars in Solomon's temple the outer pillars of the porch and not separate obelisks.

"As to Phœnicia, I think we can speak of that country as the connecting link between Palestine and Greece, or between the east and west generally.

"In regard to the reference made to Tir-yus and Mycenæ, and the great Cyclopean buildings, the interpretation of the word 'cyclops' carries the origin of the Cyclopian art of building back to Babylonia. 'Cyclops' is derived from 'Klink' 'King' and 'hob' 'flame,' 'King of the flame' or 'Nimrod.'"

Mr. Boscawen says: "The temple of Solomon was certainly of Phœnician architecture. It was probably copied from existing Phœnician temples, but those temples were themselves merely copies of the temples of Chaldea."

In the construction of the temple of Solomon we have exactly a similar arrangement to that of the oldest temples of Chaldea, and what is more the very names of the different parts of the temple are the same. The inner portion or Holy of Holies was called "Paraku" "the veiled portion."

Of the pillars "Jachin" and "Boaz," Mr. Boscawen says: "I think their origin is clearly traceable in the stones or pillars we see

standing in front of the Phœnician temples." I may here specially refer to the coins of Bilbus where you see two pillars standing in front of the temple. There is also an inscription which was discovered by M. Renan, wherein reference is made to the erection of columns in front of the temple, and the making of a "brazen altar." Still Mr. Boscawen agrees with Mr. Saunders for he says: "The Phœnicians were the early intermediaries between the east and the west. They were entirely void of the inventive faculty; their works were merely adaptations. It is wholesale borrowing that renders the Phœnician art of so much value to us."

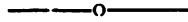
The place where this tendency is most strongly exhibited is the Island of Cyprus, which occupies an important position in the east, and forms the point of union between the three great human families—the Hemitic in Egypt, the Semitic in Assyria, and at later times the Aryan family in Greece. "We have only to look at the Cyprian ornaments in the British Museum and the collection in the *Metropolitan Museum* of New York to see how the art of the three great empires of the east was mingled in the art produced in the Island of Cyprus."

One of the gentlemen present, Dr. F. Chaplin, says "that too little prominence has been given to the fact that the temple at Jerusalem was in its general plan as well as in its details, a copy, or an enlargement of the 'tabernacle in the wilderness,' and that the pattern was determined long before the Phœnicians were engaged in their work. If we put together the plan of an Egyptian temple and the plan of the Jewish tabernacle in the wilderness or the Jewish temple at Jerusalem we shall observe a very close resemblance between them. There was the large outer wall enclosing the sacred space, then there was the entrance, and leading up from that a series of courts increasing in sacredness as they proceeded until at last the most sacred of all was reached."

Mr. Boscawen, however, says that the writer "seems to have forgotten the very beautiful examples of Phœnician art which we have in the tombs of Egypt." So thoroughly had the Phœnicians settled themselves in Egypt and become part and parcel of the people of lower Egypt that the district on which the Jewish people dwelt was known by the name of Greater Phœnicia, and Mr. Trelawney Saunders says: "Those who have gone most deeply into the question of Egypt, have come to the conclusion that Egypt derived her theology and religion and her forms and ceremonies from Assyria. It is to Babylonia we must look for the real cradle of early civilization. We cannot fail to see that in tracing the origin of art and architecture we are in fact also tracing the origin of religion."

This subject is a suggestive one, we hardly believe that it has been exhausted. The plan of the architecture of the tabernacle in the wilderness seems to have been drawn from that of the temples in Egypt, or at least a great resemblance between them may be seen. The plan of the temple of Solomon may also have been based on a design borrowed from Egypt or from Phœnicia. But the

study of the temple architecture as compared with the varied architecture of the East reveals the fact that a great difference existed between the Jewish tabernacle and temple and all others, for the inner sanctuary of both was the abode of a personal divinity and not the hiding place of an animal as in Egypt, or the shrine of the sun divinity. Emblems of nature worship or animal worship were carefully excluded, the only emblem of Divinity being the cloudy pillar which betokened God's personal presence.

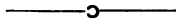


## SESSION OF THE AMERICAN ASSOCIATION IN NEW YORK.

The next meeting of the American Association for the Advancement of Science will be in Columbia College, New York City, August 10 to 17.

Dr. D. G. Brinton, who is one of the Vice Presidents, will give the opening address for that section of Anthropology.

The session being held in New York will give an opportunity to Archæologists to visit the collection of Antiquities contained in the museums such as the Metropolitan Museum with its noted Cesnola collection of Cyprus relics, the Museum of Natural History, Central Park, with its large collection of prehistoric and American and Swiss lake relics, the museum of the Historical Society, wherein is found the Abbott collection of Egyptian Antiquities. And a large number of private collections among which that of Mr. A. E. Douglass stands at the head. We have no doubt that it will be an interesting occasion.



## LITERARY NOTES.

BY THE EDITOR.

*Pect. 4. 8.*

**ELEPHANT PIPES.**—The address of C. E. Putnam, the retiring president of the Davenport Academy, contains the following language:

"In connection with the publication and distribution of volume IV of the proceedings it should be stated the paper upon "Elephant Pipes and Inscribed Tablets," which was included as an appendix, has been generally accepted as decisive of the controversy in vindicating the reputation of Rev. Mr. Gass, and in establishing the integrity of these interesting specimens as genuine mound relics. In addition to the strong support received from the distinguished scientists whose communications were published in the second edition

of that paper, we have been encouraged by still further and more emphatic testimonials. Notable among the distinguished gentlemen abroad who have thus championed our cause, I may mention M. le Marquis de Nadaillac of Paris, France, and Dr. Max Uhle of Dresden, Prussia. The former in a paper entitled, "Les Pipes et le Tobag," makes special mention of the unfounded accusations of Mr. Henshaw, and maintains the great antiquity of man in America, thus removing a principal objection to the genuineness of the pipes and tablets. This paper contains illustrations of one of the elephant pipes, as well as some others in the Academy Museum. The paper of Dr. Uhle was especially devoted to these relics, and indeed, is entitled, "Concerning the Two Elephant Carvings from America." It was published under the auspices of the Berlin Anthropological Society, of which the distinguished Prof. Virchow is president, and contains excellent illustrations of both elephant pipes. Dr. Uhle thus refers to the paper issued under the auspices of the Academy:

"Mr. C. E. Putnam, of the Davenport Academy, in an article upon the Elephant Pipes in the museum of the Academy which appeared in volume IV of its Proceedings, has replied to Mr. Henshaw's attack, and though many may not have seen it, it was received by the writer of this article, as was also the second edition, who therefore considers it his duty to help to bring it to a larger audience."

Dr. Uhle then proceeds to notice the facts connected with the discovery of the relics in question, and the circumstances involved in this controversy in these emphatic terms:

"Henshaw has sought by falsely representing that the tail is wanting in both pipes to make a point against their genuineness. But on the originals, as well as on the correct pictures of them, the tails are plainly visible. Moreover, Henshaw was not correctly informed of the circumstances of the discovery. The arguments against the genuineness taken from the circumstances of the finding fail absolutely. Hence the whole attack has been very badly prepared, and the points upon which he principally based his charge of unguineness are altogether without foundation. The impression, therefore, which we receive from the reply of Mr. Putnam is the opposite of that from Mr. Henshaw's paper, and is favorable to the genuineness of both these interesting relics."

**DIALECTS OF NORTH GREECE.**—Mr. H. W. Smyth has an article in the *American Journal of Philology* in which he shows that Thessaly was the cradle of the Greek race; at least of the Æolic branch of it. When the new comers from Thessaly took possession of Boeotia the Minyæ fled to Lemnos. This would seem to indicate a migration from the East, and so contradict the theory advanced by Mr. Weise.

**ALEXANDER THE GREAT.**—The portraits of Alexander the Great are numerous, commencing with the conqueror's boyhood. He is always represented as holding his head to one side, owing to contracted muscles. He is sometimes represented after the type of the god Zeus holding a thunderbolt. There is a statue of Alexander by Lysippus and two elaborate compositions which recall the hunts and battle pieces of Assyrian kings. Bronze hounds, lion at close quarters, and noble attendants accompany the figure of Alexander. A gold and ivory portrait as seen by Pausanias, was ordered by Phillip, the father of Alexander. Nikias was the author of an excellent Alexander.—*Alfred Emmer-son in Journal of Archaeology, Dec. '86.*



**THE ATTIC LEKYTHOI.**—A lekythos is a vase for ointments or perfumes. The white lekythoi of Attica belonged to a well defined period from the Fifth Century to the first half of the third. The vases were placed with corpses. The scene is mainly suggestive of death. The three principal events after death were lying in state, carrying forth in procession, and burial proper. After burial the soul is supposed to begin a long journey. Hermes, the divine guide of souls; Charon the ferryman, are represented on the vases; the first bearded, the other as an old man. The Lekythoi represent the Cult of the tomb, in the center of the stele or mound. Before it are grouped figures of living persons; frequently female figures. These Lekythoi represent the state of art and the mythical ideas of the period. The loving devotion of the survivors is, however, the chief thing portrayed thereon.—*John H. Wright in, Journal of Archaeology, Dec. '86.*

**DR. SELAH MERRILL** has returned to this country from Palestine. He has furnished the *Andover Review* an article upon the site of Calvary which he maintains was outside of the second wall.

**TAPHANES** was an important city in the time of Ezekiel and Jeremiah. Mr. W. F. Petrie has excavated near Tel-ed-Defeunch and found a great extent of ruins.

**THE MOABITE STONE.**—We have at last a thoroughly good publication descriptive of this remarkable stone, in a work by Prof. Smend and Socin. Eighty and ninety new letters have been made out and a number of new readings furnished.

**EXCAVATIONS AT JERUSALEM.**—A subterranean vault of considerable size with carefully built walls has been found six meters under the present surface near the Damascus gate. Some fine specimens of Mosaic and some splendid columns, supposed to belong to the basilica of St. Stephen, have been found.

**THE GRAVE OF HELEN**, Queen of Adiabene has been found, it is supposed, near the same place where the basilica was situated.—*Old Testament Student, Jan. 1887, p. 157.*

**THE TEMPLE OF ZEUS AT OLYMPIA.**—The discussion concerning the figures on the pedaments of the Temple at Zeus is still going on. Mr. R. Foster maintains that it is impossible to ascribe the figures of the western pedament to Alkamenes; as indeed it is impossible to ascribe the figures of the eastern pedament to Paionios. These compositions are older than the work of Pheidias, older than the corresponding work upon the Parthenon. The age of Alkamenes is uncertain; but it is a careless tradition which tells of Pheidias as the great master artist of the temple.—*Journal of Philology, Vol. VII, No. 4, p. 531.*

**ANCIENT INSCRIPTIONS.**—A book was published in Leipzig in 1885 prepared by Emanuel Loeny on the Ancient Inscriptions which have the signatures of sculptures in the Sixth Century, B. C., three out of thirteen names attested by literary evidence; in the 5th Century, seventeen out of twenty-two; in the 4th, nineteen out of twenty-four. The inscriptions by the forms of letters and peculiarities of writing, not seldom fix the chronological sequence of artists and by the nature of the information they afford as to nationality, parentage and like matters, supplement to a remarkable extent meager literary informa-

tion. This knowledge has something of the interest and fascination attaching to the study of autographs. The great value of inscriptions is at once apparent in filling up the gaps in our knowledge of Greek art. Facsimiles in Lowey's book present in chronological sequence typical specimens of the writing in Greek upon stone, practiced between the Sixth Century B. C., and the time of the Roman Emperors.

GREEK AND ROMAN CIVILIZATION.—Mr. O. Weise discusses the point whether Rome owed to the Greeks or to the Phœnicians the civilizations which appeared at an early date. He ascribed not a little to the Greek settlement in Etruria and Cumæ.

Sept. 4. D. +

EUROPE THE HOME OF THE ARYAN.—A revolution in the opinions of the philologists as to the early home of the Aryan race seems to be going on. It has been supposed that the parent speech originated in Asia the region where the Sanscrit prevails. The tradition of the Biblical Paradise placed it also in Asia. It was supposed that the migration of ancient times began in the east and moved westward. The claims of Europe are becoming as great and appear to be as well defended as those of Asia. The researches of Ludwig Wilser lead him to conclude that the movements of the Scythians, Thracians, Celts, Germans and Slavs were from west to east and from north to south. The Germans dwell where the first arrivalists found them. The broad domain of the present Indo Germans implies many thousand years development and extensive pre-historic migrations from a common parent tribe. The conditions imposed upon this primitive tribe are best filled by the people living in the Scandinavian peninsula. In speech, physique and manners the primitive tribes still dwell in the place of their origin. The antiquities, customs and employments of the primitive Aryans are found there. The old stone period represents the lowest stage of being in France, where man is but little above the animals about him and used instruments made of stone and horn. This people was called the cave dwellers. The immigrants from the North subjugated them before they had made any advancement. These conquerors were so-called "pile villagers," who had the beginnings of an ordered household, lived in communality, enjoyed a provincial constitution, and knew something of law. Their weapons were still of stone and horn but of much superior workmanship. To this period may belong the Dolmens or Cromlechs. If these remarkable monuments belong to the same people, as would appear from their striking similarity, their spread would indicate extended pre-historic migration, since they are found in Sweden, Denmark, in the British Isles, in Western France, Switzerland, Spain, Algiers, Tunis, Palestine, on the Caucasus and in India; though it is not certain that these are monuments of the Aryan race. Next is the transition period to the Bronze Age. The workers in bronze were from the North. Physical geography, the animal and vegetable kingdom are laid under contribution to prove the northern home of our race. Those animals and plants mentioned in common by the Aryan languages belong to the Northern European fauna and flora; and even those which have long ago died out in the north have retained their old domestic names. The elephant is called in Sanscrit *pilu*, Iceland *fil*, Danish, *fil*. The specific Aryan type of pre-historic times is found in Germany and Scandinavia, the sturdy, robust, physical nature and the highly developed intellect of the Aryans cannot be the product of an enervating southern climate, but must have reached maturity on a soil

whose scanty gifts call forth all the mental and physical gifts of its people. The richness of the German language in nautical terms implies an early knowledge of the sea. The magnificent bronze finds from Scandinavia show the most remarkable correspondence with those of Old Greece, Asia Minor, Caucasus, Old Italia, Gaul, Persia and Etruria. Their similarity can only be accounted for by the supposition that these works and the art must have been carried along on the migrations which have ever been southward. Copper is found in Sweden and England, and the latter country supplied nearly the whole world with tin in early times. The similarity of all the older European alphabets, Old Greek Etruscan, Umbrian, and the German Runes indicate a common origin. Hitherto the Phœnicians have been considered the inventors of their alphabet, from whom the Hellenes borrowed it and transferred it to the other European nations. But the Runes are the original of the Aryan alphabets; the Germans brought them from Scandinavia. German Runes existed before there was any contact with Greece or Rome. The Iberi were the predecessors of the Kelts. The present Basque language was derived from the Iberians. The state of culture among the primitive Aryans must have been low, the development of the different families gradual; their principal occupation must have been stock raising and in a restricted way agriculture. Thus a complete reverse of the established opinions about language, races, migrations, etc.

*P. A. Y. G.*

**RECENT DISCOVERIES IN ROME.**—There were in Rome toward the middle of the 6th century of our era, 80 bronze statues representing gods, 3785 figures miscellaneous, 25 brought from Jerusalem by Vespasian making 3890 bronze pieces. The most of them have been lost. The removal of the capitol by Constantine, the overthrow of the pagan religion, and the iconoclasm which followed, the incursions of Alaric and the Goths, also of the Vandals, and other causes will account for this. A few statues have been preserved at Rome which were never lost. The "bronze wolf," the equestrian statue of M. Aurelius, the colossal head of Domitian, the "boy extracting a thorn," and the Hercules, are the chief. The following finds have been made during the present century. In 1849 a remarkable collection of works of art containing the Bronze Horse, a Bronze Bull, a Bronze Foot, and the Apoxyomenos of Lysippos. In 1864 the Vatican Hercules was found under the sub structure of Pompey's Theatre. In 1881 a collection of bronze busts was found when laying the foundations of the English Chapel, and at about the same time a set of bronzes was found by Madame Ristori under the foundations of her palace. In 1885 there were found on the Quirinal Hill two bronze statues which may be classed among the finest masterpieces in bronzes. One of these represents a naked athlete 7 ft. 4 in. high, 2 ft. wide at the shoulders. The other was a figure in a sitting posture representing a wrestler or boxer in repose. The following is the description: "His torso bends gently forward, his elbows rest on the knees; his attitude is the attitude of a boxer exhausted by numerous blows received, as if panting from sheer fatigue but ready to start up again at the first call. The face, of Herculean type is turned toward the right, the mouth is half open, the lips seem to quiver as if speaking to some one; the nose is swollen from the effects of the last blow received, and the neck, shoulders, and breast are seamed with scars. The moulding of the muscles of the arm and of the back is simply wonderful." This bronze statue is supposed to be of Greek origin. The third statue was a Bacchus, which was discovered head

downwards 16 feet below the bottom of the River Tiber, 26 feet below the surface of the water, when digging for the foundation of the middle pier of a new bridge.—*R. Laciari in Century, Feb. '87.*

*part. 4. B*  
**BABYLONIAN SEALS.**—The study of seals as of coins is one of the departments of Archæology. Seals contain records which are even better than the clay tablets, for they are older and contain earlier records. A barrel shaped seal contains the impress of Sargon the First, who reigned B. C. 3,800. There are many collections of seals but very few of them as old as the one mentioned. There are collections in the British Museum, in the Louvre, and the Bibliothèque Nationale and the Metropolitan collection. The following are the persons who have written on the Seals. Lenormant in his "Fragments de Beroze;" Geo. Smith in his Chaldean Genesis; Menaat in his Glyptique Orientale; Cullimore, Layard, and De Clerc; Dr. Wm. Hays Ward has gathered some new seals which he has described. The material of many seals is hematite, the very oldest are not of this material, but hematite seals are of great mythological value. The following is a description of some of the oldest seals: 1st. Seal of Sargon, B. C. 3,800; wavy lines which represent a river; above this Gisdubar on one knee holding a vase; in front of the hero stands a bull buffalo drinking water from the vase. Gisdubar is the ancient hero of Chaldeæ, the biblical Nimrod. He was one of the last kings of Sippara, five of whom lived before the flood. His capitol was one of first importance after Babylon, the site of which has recently been discovered. The hieroglyphics on this seal are in plain lines, not wedge-shaped, a type which preceded the cuneiform. 2. Gisdubar and the Lion, B. C. 3,800. Gisdubar lifts a lion upon his shoulder. This seal is of banded jasper, red and white; it is in the British Museum. 3. B. C. 3,500, represents Gisdubar and the lion, but the attitude of the animal and the god is different. The god is standing erect and the lion raised on his hind legs with mouth open, is struggling with the god. 4. B. C. 3,000, represents Gisdubar killing the Bull of Anu. According to the epoch, the goddess Ishtar became a suitor for the love of the hero, promises wealth, servants and pleasure. He rejects the beauty and love of the goddess and in revenge, Anu, the father of Ishtar sends the human-headed bull against him. He gains a victory over the bull and mutilates the mighty carcass. The constellation Taurus commemorates this myth. 5. Gisdubar and his friend Heabani fighting a lion; B. C. 3,500. Heabani has the body of a bull, head and arms of a man. The two friends appear often together, one fighting a lion and the other a bull. Heabani resembles the Greek Satyrs. These five seals represent one class. Another class follows. On these the inscription is cuneiform. The figures are mainly human; the dates from B. C. 2,600 to B. C. 2,000. The figures are, 1st. A seated deity with the crescent as the symbol of the moon. The moon god is always bearded. The figures are all clothed; in the Gisdubar seals, none of them are clothed. Before the moon god is a figure draped, with the left hand raised and leading a third figure with the right hand raised. Sometimes there is a fourth figure following the one that is led. Mr. Ward thinks that the scene represents a god on the throne of judgment, the soul of the dead is brought before him for decision. His reasons are as follows: The chief figure is sometimes not wholly human, but has the head, shoulders and arms of a man; the body, tail and legs of a bird. Two such seals are represented by Mr. Ward. The discovery by Mr. Rassam of a remarkable tablet confirms this opinion. In this tablet, the sun god sits on his throne, within a shrine.

Near his head are the emblems of the Moon, Sun and Venus, or, to designate them mythologically, Sin, Shamash and Ishtar. In front of the shrine is a table or altar, on which stands what looks like the capital of an Ionic column; and on its volutes an immense disk figured to represent the sun, and held upright by cords let down from above and held by two divine beings. In front of the altar as if approaching it, is our familiar group of three personages, one leading the second, and the third with hands lifted. These, being represented as much smaller than the seated figure, were taken by the Arabs for Shem, Ham and Japheth. This tablet was made by King Nabubaladan, perhaps 1,200 B. C., and belongs to a period when this design had been in use for at least a thousand years. This tablet was by the workmen said to represent Noah, the three figures his sons. This scene representing the soul of the dead brought before the judge reminds one of the Egyptian Book of the Dead, but in the most common of all mythological figures on seals and was in use from the time of Lik-bagar 2,500 B. C. to that of Nebuchadnezzar 625 B. C. A third class of seals bearing date about 2,000 B. C., represents the biblical story, creation, fall, flood. One contains a man and woman in a boat supposed to be Noah and his wife, though it might be the souls of the dead carried over the water. Another represents a man and woman seated on either side of a tree with a raised serpent at the right hand of the woman; probably represents the temptation. A third tablet of the same class represents Bel and the Dragon, creative force and the chaotic abyss. The dragon is a scaly monster with four legs, a lion's head and eagle's claws. This is a symbolical legend typifying the creation, and reminding us of the story of the serpent and the divinity in Genesis. A fourth class of tablets represents a gate, passage of the dead, a god before the gate; symbolizes the Babylonian idea of the under world; the goddess was compelled to pass through seven gates, removing her garments and ornaments at each until she came naked into the presence of the Deity.

DR. W. H. HOFFMAN, one of the assistants of the Bureau of Ethnology at Washington, has received distinguished honors for scientific and artistic merit as he has been named by the Prince of Portugal "Chivalier of the Order of St. James," one of the oldest orders of chivalry in the world, its creation and institution dating back, according to some authors to A. D. 1177, and to the and to the most recent research even as early as 1125.

THE MACLEOD HISTORICAL SOCIETY.—The Macleod Hist. So. was organized in June, 1854. The following list of papers read will give slight idea of the work done: American Indian Literature; British Historical Battles; Sketch of Alberta since the Advent of the North West Mounted Police; Canada, its Past History and future Development; Aerial Currents; Ocean Currents; Origin of the American Indians; The Development of English Literature; The Blackfoot Confederacy; Blood Indian Sign Language; Sketch of Southern Alberta, prior to 1874; Cremation; The Mortuary Customs of the Blackfeet. The officers of the society for the present year are: President, G. A. Kennedy, M. D.; Vice-President, C. C. McCaul, B. A., Barrister; Secretary-Treasurer and Librarian, Rev. R. Hilton; Corresponding Secretary, Rev. John McLean, A. M.

## LINGUISTIC NOTES.

BY ALBERT S. GATSCHET, WASHINGTON, D. C.

ONONDAGA AND DELAWARE.—The lexical manuscripts of the missionary David Zeisberger, collected during his stay among the above tribes and since preserved in Cambridge, have just been edited through the munificence of Mr. Eben Norton Horsford, manufacturer in Boston, and formerly professor of chemistry in Harvard University, Cambridge, Massachusetts. The two lexica are combined into one, with English and German definitions added, and form a splendid quarto volume of 236 pages. The title is as follows: "Zeisberger's Indian Dictionary: English, German, Iroquois-Onondaga, Algonquin—Delaware. Printed from the original manuscript in Harvard College Library, Cambridge, John Wilson & Son, University Press, 1887."

THE IXIL LANGUAGE is now spoken only in three villages of Northern Guatemala, Nebaj, Cotzal and Chajul, situated in a bend of the Rio Negro, in the Sierra Madre. The population amounts to less than 10,000 persons and forms a sturdy race of mountaineers, strongly adhering to the old, unprogressive Indian customs. The language forms one of the dialects of the Mame group, (Maya family,) and possesses four explosive sounds, (*letras heridas*), which foreigners do not readily acquire. Dr. Otto Stoll, who during five years was a practicing physician in Guatemala, has studied that language on the spot in May 1883, and now gives to the world the result of his investigations in a book entitled *Die Sprache der Ixil-Indianer*; Leipzig, 1887; 10 and 157 pages. The Ixil verb bears some analogy with the other Maya languages by being a noun-verb; in the majority of its forms it is found to be connected with the possessive pronoun, and wherever it is formed otherwise, the substantive pronoun personal is appended to it as *suffix*. Tenses are formed by particles which can assume polysynthetic forms and are added to the verbs nominal base as *prefixes*. The language possesses some suffixes common to the noun, and the noun-verb; others are found connected with the noun others with the noun-verb only. On pp. 105-180 we find a vocabulary of the language, in which the affixes are carefully made distinct from the radix by hyphens. It embraces about 800 words of the language and is preceded by a short text of ethnographic value. The appendix contains a useful collection of vocables taken town by Dr. Rockstroh among the Indians of Aguacate, Jacaltenango, Chuj and of a pueblo of the Mames. Like Ixil, all these languages belong to the Mame group of the Maya family and are useful in explaining many of the more obscure points in the Ixil language.

COSTARICAN LANGUAGES.—In the "Archiv für Anthropologie," 1880, pp. 591-627, Dr. Polakowsky, who formerly visited that Centro-American country, has re-edited a portion of Bishop B. Aug. Thiel's Costarican vocabulary, 1882, and added the German signification to the Spanish terms. The vocabularies re published by him are only the Boruca, Terraba and Guatuso, which are contained in the second and third part of Thiel's publication. The republication of the six vocabularies contained in the first part of Thiel's volume, (Bribri, Cabécar, Estrella, Chirripò, Tucurrique and Orosi,) is perhaps reserved for some future number. The scientific determination of the numerous animals and plants mentioned in Thiel make Polakowsky's work especially valu-

able. In an appendix Rev. Wilhelm Herzog has given comparative tables to prove that all the Costarican language heretofore explored belong to the great Tupi-Guarani family though affinities with other South American languages, as the Choco and Kechua, are adduced also. Dr. William Gabb of Philadelphia was the first scientist who gave a *comprehensive* sketch of the Indian tongues of Costarica. (1875.)

THE AINU LANGUAGE of Northern Japan, spoken also upon the mainland opposite, has been made the subject of a separate treatise by John Batcheler, of the Church Missionary Society. It was published in 1887 at Tokio, Japan, as No. 1 of the "Memoirs of the Literature College, Imperial University of Japan," pp. 77-186; 8vo. Like the majority of the agglutinative languages, Ainu has no inflection of the noun for number, case or gender; the inflection of the verb is effected by participles in about the same manner as in Polynesian, or by means of auxiliary verbs. Many verbs have a special plural form as: tui, *to cut one object*, tuiipa, *to cut many*; among the examples given of this there are as many transitive as intransitive verbs. The sound *l* is not in the language, and *f* is used only before *u*. Many terms are borrowed from Japanese, and in the phonetic structure both languages resemble each other considerably. The Count de Charencey thinks that Ainu and Korean are of the same linguistic family. The same number or the "Memoirs" contain an interesting study by Prof. Basil Hall Chamberlain, of Tokio, upon "The Language, Mythology and Geographical Nomenclature of Japan viewed in the light of Aino studies;" pp. 1-75. The Ainu are not an imaginative people, and thus they have borrowed many myths from their more cultivated Japanese neighbors. Many local names in countries long since inhabited by Japanese only are of Ainu origin, and thus point out the ancient extent of that nationality.

REV. JOHN CAMPBELL, Professor in Montreal sends a pamphlet entitled; "*Etruria Captia*," which forms a portion of Vol. III, (1886) of the proceedings of the Canadian Institute, pp. 1-123, (Toronto, 1886, 8vo.) This article forms a sequel to others of the same author, in which he seeks to establish a connection between European and Asiatic dialects of antiquity and the American and other illiterate languages. This time he compares Basque and Etruscan with the newly discovered Hittite inscriptions upon the Upper Euphrates, which nobody but he has been able to decipher heretofore. The "Capturing of Etruria" is therefore a remarkable scientific achievement, and it requires considerable concentration of mind to follow Campbell through the explanations and translations he gives of almost undecipherable inscriptions. On page 10 the author asserts that *the inscriptions of Asia Minor, Italy, Spain and Britain yield Basque*, and on the same page we find another statement, which is still bolder: "Various as are the grammatical forms of Basque, Caucasian, Yeniseyan, Japanese, Korean, Iroquois, Choctaw and Aztec, *they are one in point of vocabulary and constitute, with many other members, a linguistic family of no mean importance, of which the parent speech belongs to Syria.*"

#### ETHNOLOGIC NOTES.

BY ALBERT S. GATSCHE, WASHINGTON, D. C.

GLAZIER AS A DISCOVERER.—Hon. James H. Baker has published in the "Collection of the Historical Society of Minnesota," VI, Part Sixth, a report

read by him before the society on Feb. 8, 1887, entitled "The Sources of the Mississippi; their Discoverers, Real and Pretended," (pp. 28; also separately printed). Jean N. Nicollot in August, 1836, had explored all the headwaters of this river and pointed out a creek surging at the foot-hills of the "Hauteur des Terres" as its true source, being the affluent furthest removed from the mouth. He also states that the honor of having first explored the sources of the Mississippi belongs to Mr. Schoolcraft and Lieut. Allen in July 1832. The latter called the reservoir, into which all the small affluents of that region assemble, Lake Itasca, from the Latin words *veritas caput*. To give it an Indian sound he had to cut off the head and the tail of this abnormal phrase to produce the euphoniously-sounding *Itasca*.\* From the earliest period the Ojibwe Indians had called the whole Itasca lake-system *Omoshkos* from the form of an *elk*. The claims of Capt. Willard Glazier, who visited this water-basin but for a day or two in 1891 and proclaimed Elk Creek one of the tributaries to Lake Itasca, as the real source of the Mississippi, are then refuted at length as visionary and ill-grounded.

DAVIS ON INDIAN GAMES.—Mr. Andrew McFarland Davis, of Cambridge, Massachusetts, has been busy collecting dates on Indian amusements and games from authors of different periods and countries. The items hitherto published are on the games of lacrosse (mentioned as early as 1636), platter or dice, straw or Indian cards, chunkee or hoop and pole, other games of chance or requiring athletic exercise, contests of skill, amusements of women and children, etc. There is a great uniformity perceptible between the games of the East and the West and Pacific Coast Indians, and Mr. Davis does not treat of games of Central and South America. His two articles, of which one is a supplement to the other, have appeared in the Bulletin of the Essex Institute, Vol. 17 (1886), and Vol. 18 (1887), published at Salem, Massachusetts. Mr. Davis is also the author of a learned article on the history of Louisiana in the fifth volume of J. Winsor, Narrative History of America (1887).

WOODEN-PLATE ARMORS are a sort of aboriginal cuirass prevalent among the Coast Indians upon the Pacific Ocean from California northward and among some other nations as well. Although they have disappeared rapidly after the introduction of fire-arms, some of our museums have secured a few at considerable expense. In the Royal Bavarian Academy of Sciences, Professor Fr. Ratzel has read a paper on *Plate-Armors and their geographic distribution along the Northern Pacific Ocean* on May 1, 1886, and accompanied it with a plate of illustrations. (Sitzungsbericht, pp. 181-216). Wood is not the only material from which the lamellæ covering the leather armors were made; some were discovered that had been manufactured from walrus-teeth, and in their shape and length they differed largely. It is curious that the custom of labriferetry covers almost the same territory as that of carrying the plate-armor; cf. W. H. Dall in Third Annual Report of the Bureau of Ethnology, Washington, 1885, pp. 77-92. The Klamath and Modoc Indians used doubled up elk-skin armors without any additional covering, but the Kalapuyas of the Willamet Valley, Oregon, overlaid the elkskin with small flat sticks, like the Indians north of them.

JOHN MURDOCH, of the U. S. National Museum, stayed from 1891 to 1898 with the U. S. Polar Expedition among the Eskimos at Point Barrow, in

\*The correct Latin expression would have been *caput verum*, "the real source."



Alaska, northern coast. There he collected several myths which these people have in common with the Inuit or Greenland Eskimos, and published them in the July No. (1886) of the *American Naturalist* (Philadelphia, pp. 593-599). They embody accounts of the creation of man, reindeer and fish, thunder and lightning; the story of the Kokpausina brothers; a murder at Cape Smyth; the people who talked like dogs; Iglu Nuna or "house-country;" the monster *kilirfak* and the ox *ugruna*. The same author has inserted in the *Naturalist* of February, 1887, an article on Dr. Rink's views upon the East Greenlanders, recently studied by a Danish expedition under Capt. Holin. The views of that scientist on the Inuit race in general are examined and contrasted with his own (pp. 183-188).

PINART ON THE ISTHMUS.—In the Bulletin of the "Société de Géographie," Paris, 1885, pp. 20, Alphonse L. Pinart gives an interesting account of his travels west of Panamá and Aspinwall, under the caption of "Chiriqui. Bocas-del Toro, Valle Miranda." Being an officer of the Panamá Canal Company he had sufficient leisure to visit these countries so little known to ethnologists. On Nov. 2, 1883 he started from Bocas del Toro, a small town on an island in the Caribbean Gulf, and visited the Vallente Indians at Gobrante, the 4000 Guaymies, mostly living in the Valle Miranda (with three subdivisions), on the northern slope, about 8° 45' Lat. North, of whom a detailed ethnographic sketch is added. He then crossed the Cordilleras to the southern side and found at Caldera or Chumulu the remnants of the Dorasque Indians, of whom there are a few at Potrero de Vargas also. His passage over the mountains was rather perilous. Concerning the celebrated *huacas* of the Chiriqui country, in Panamá State, he states that they occur most frequently around the Chiriqui lagoon, but that they extend as far east as the railroad track from Colon to Panamá, and that the isthmus also seems to form the eastern limit of the pictured rocks. A little map is added to Pinart's instructive article. A few years before, he had published four vocabularies of these regions, collected about 1800 by Padre Franco, in his "Collection de Linguistique Américaine," Vol. VII; the dialects are all Guaymi: the Dorasque, Norteño, Sabanero and Guaymi proper.

A. H. KEANE, Professor of Ethnology at the London University, Gower street, is the author of a small monograph on the *Lapps*, which was published in the November number, 1885 of the Journal of the Anthropological Institute of Great Britain and Ireland. For three reasons, which are deduced from the quality of the skull, it becomes improbable that they have ever been *one people* with the Eskimos. (pg. 9.) The same author wrote "*Ethnology of Egyptian Sudan*," (same journal, November 1884,) and on the last four pages gives his classification of five African groups and an unclassified one into tribes; these five are the Bantu, Negro, Nuba, Semitic and Hamitic groups.

ORNAMENTATION ON NEW GUINEAN IMPLEMENTS AND CARVINGS.—The 4th publication of the Royal Ethnographic Museum at Dresden, issued by the Director, Dr. A. B. Meyer, consists of an examination and discussion by Dr. M. Uhle of wood and bamboo relics from Northwest New Guinea, (chiefly collected by Dr. Meyer), with particular review of the ornamentation. The work is in folio, and contains, in addition, seven photo-lithographic plates of the highest artistic grade yet attained.

The ornamentation upon the bamboo cylinders and on the shafts of weapons partakes of animal characters chiefly, from the simplest to the most complex forms, presenting the evolution of art admirably. The author, in his conclusions, treats of the question whether these artistic designs are an independent development, or whether the natives of Green Bay have been influenced by the art of Papuans of other portions of New Guinea or of the East Indian Archipelago. Results prove that the intrusion from the Indian Archipelago does not affect the immediate vicinity of Green Bay, but extends in a narrow strip along the southwest and northern coasts, until the eastern regions are compared, when another type predominates, presenting mere traces of Malay influence. The study and comparison of many of the intricate figures here presented, are of special value in the investigation of pictographic art among the peoples of the Pacific Islands and the carvings and tattooing of the natives of the northwest coast of America. Attention has already been called to a possible connection between these widely separated regions, and future attention to this interesting subject, by persons having the ability and opportunity, may go far to verify what now seems a well grounded theory, *i. e.*, of former inter-communication.

The late Dr. Tolmie, of Victoria, B. C., informed the present writer in 1884, that when the Hudson's Bay Co. had sent him to the west coast in 1833, he failed to discover tattooing among the adult natives of Queen Charlotte's island, but that soon thereafter the art was brought back by Indians who had spent the winter in the Hawaiian Islands and the summer in seal fishing, etc., along the coast and islands of the Santa Barbara channel. Suffice it to say, the types of carvings shown in the present work, are strikingly similar to many of those of the American coast, while in the latter, tattooing was practiced in as elaborate a style as in the South Seas.

W. J. HOFFMAN M. D.

## NOTES FROM THE FAR EAST.

BY PROF. JOHN AVERY.

YEAR BY YEAR we are enlarging the range of our acquaintance with the languages spoken on the north-eastern border of India. Within the last twelve months there has been published at Shillong, Assam, the head-quarters of the Chief Commissioner of that province, an outline grammar of the Shaiyang Miri language. The compiler is J. F. Needham, Esq., Assistant Political Officer, stationed at Sadiya, the principal town of upper Assam. To this place the surrounding tribes resort for trade; and it was in order to promote friendly intercourse between these suspicious and excitable savages and the people of the plains that Mr. Needham was assigned this post three or four years since.

One of his first duties was to learn their languages, as affording the surest avenue to their hearts, and to a correct knowledge of their customs and needs. Nothing wins their confidence like talking to them in their own tongue. Says the Rev. F. Endle: "Few things are more pleasing than to see the flush of real pleasure and intelligence which passes over the dull, heavy, expressionless features of the Kachari's countenance on being addressed in his own mother tongue."

The plan of Mr. Needham's grammar is in general the same as that of Mr. Endle's Kachari grammar. It is not so much a compendium of paradigms and abstract rules as a collection of appropriate sentences, illustrative of the usages of the language. A hasty perusal of the work shows that the speech of the Miri tribe—or, more exactly, the Shalyang clan of that tribe—displays some of the well-known characteristics of the Tibeto-Burman group; but also has peculiarities of structure not observed in the longer known tongues of Lower Assam.

It is because the linguistic zone along the northern and eastern border of Assam has hitherto been mostly *terra incognita* that we are particularly grateful for this excellent result of first explorations in that direction.

The Miris are settled in the vicinity of Sadiya on the Brahmaputra river and its northern affluents, the Dihong and Dibong. They act as go-betweens for the Assamese and English, on the one hand, and for the Abors, further back in the hills, on the other. It is an interesting fact that the speech of these two tribes is the same in almost every particular; which affords a strong presumption that they are in reality one people. Mr. Needham is now studying the language of the Singphos, a tribe lying east of Sadiya; and we may look for a grammar of that tongue without long delay. In the year 1884, Mr. Needham visited the principal Abor villages; and was received with much hospitality, as these savages understand that word. The last European, and almost the only one, who had undertaken a friendly visit was Col. Dalton, thirty years before. To venture, without a strong escort, among people so resolute, sensitive, and reckless of life, was regarded as extremely hazardous; and probably many who saw the brave officer depart scarcely hoped to see his face again. But, as we have intimated, the expedition was a complete success; and this was owing in a great degree, to Mr. Needham's considerate, patient, and truthful bearing toward the people. In the history of England's dealings with the uncivilized tribes occupying or bordering on her eastern possessions, we could point to more than one other shining example of permanently friendly relations brought about by the firm, but Christian policy adopted by her servants.

Mr. Neville, in the *Taprobanian*, Part VI., continues his account of the Yeddas, and adds much to our knowledge of that tribe. In doing so, however, he contradicts some statements made by the earlier writers—such as inability to laugh, ignorance of artificial shelters, marriage with one's sister or daughter. A close acquaintance with savage tribes usually results in obliterating or toning down peculiarities which have appeared to set them apart from the rest of mankind. Where original divisions have not been lost by contact with other peoples, the Yeddas distinguish about a dozen family clans, called in their own tongue *varuge*; and these are subdivided into territorial clans, each of which has the exclusive right to hunt over a certain district. Marriage is not allowed within the same territorial clan; and, since father and mother belong to different clans, their son seeks to marry the daughter of his mother's brother, and their daughter accepts as a husband the son of her father's sister. Monogamy is the strict rule, and infidelity in married life is hardly known. The morals of young girls are carefully guarded, but more license is permitted to widows. Once it was not the custom to bury the dead, since the lifeless body was held in no esteem; but corpses were flung into a crevice of the rocks or covered with brush, just to keep them from being devoured by beasts. A few days after a death, the relatives assemble and hold a feast near the spot.

The Vedda has generally been represented as nomadic; but his wanderings are regulated by system. He is not allowed to build his hut beyond the territory belonging to his clan; and within these limits he is restricted to the portion assigned by the elders. His residence will be changed several times during the year, following the migrations of the game, upon which he chiefly subsists. At such times he is assigned the exclusive right to watch for game at a certain pool, or to gather honey-comb from a section of a precipice. It is then that he is glad to find some commodious cave to furnish temporary shelter for himself and his family.

The ordinary clothing of Veddas in their native forests is a piece of cotton cloth for the men, merely covering the loins, for the women, reaching to the knees. It is said that formerly, when cloth was hard to get, leaves were sometimes used instead.

Mr. Neville says that Veddas are not idolators; but that offerings, accompanied with singing and dancing, are made before decorated poles, pieces of lattice work, arrows, and other objects, which are regarded as symbols of deity. They call their gods *Takaso* and the *devas* of the Sinhalese are in their view devils. They do not worship the spirits of deceased ancestors, as having acquired divine attributes, or interfering in the affairs of the living; but they have various ways of paying dutiful respect to their memory.

---

The Vienna Oriental Journal is a new publication devoted to studies in the history and philology of the East. It will contain both original articles and miscellaneous notes and reviews. Communications will appear in the principal languages of Europe; but those relating to India will always be in English. The Journal will be issued quarterly, and will cost in this country three dollars. The first two numbers have already appeared. The names of the editors, among whom are Professors G. Bühler and F. Müller, are a guarantee of the high character of the periodical.

---

In the *Indian Antiquary* for April we find a curious letter, which was written by the famous Moghul Emperor Akbar, asking for the Christian Scriptures. It was sent, probably in the year 1576, by an ambassador to the Archbishop or some high dignitary of the Portuguese at Goa. It reads as follows: "In the name of God. Letter from Jallālu'ddin Muhammed Akbar, the king placed on his seat by God. Chief Padres of the order of St. Paul, let it be known to them that I am their great friend. I send them 'Abdu'llah, my ambassador, and Domenico Perez, to ask you to send to me with them two of your *litterati*, (and) that they may bring with them the Books of the Law, and above all the Gospels, because I really desire much to understand their perfection, and pressing demand that they come with this my ambassador and bring the Holy Books, that by their arrival I may obtain supreme consolation: they will be dear to me, and I shall receive them with every possible honor. And when I shall have been well instructed in the law, and shall have understood its perfection they may return whensoever they like, and I shall send them back with great honors, and worthily remunerated. Neither let them be at all afraid, as I take them under my protection and guarantee their safety."

## NOTES ON EUROPEAN ARCHÆOLOGY.

BY HENRY PHILLIPS, JR.

IN A TURF-MOOR near Bremen were lately discovered in the remains of a grave a number of ornaments of bronze and amber; the objects were of importance from their size and patterns.

NEAR SCHUBIN were found six skeletons, one of which in life must have measured seven feet in height, together with a metal-pointed lance and a necklace; later at the same place another skeleton was discovered with five small rings of lead, whose size and shape precluded the idea of their having been a necklace.

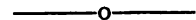
IN THE Grotto of Montgaudier beneath 70 centimeters of mud, etc., has been found what M. de Nadaillac terms "one of the finest specimens of pre-historic art," and styles *Le Baton de Commandement*. On the one side is the representation of a seal, on the other, two long, spotted animals; the execution is very unequal, of the former being very finely engraved, while the latter is evidently not by the same hand. In the same deposit were found remains of the *felis spelæa*, *hystæna spelæa*, *ursus spelæus*, *bison*, etc.

M. DE CLOSMADÉUC still continues his explorations in the turuli of the Morbihan with great success, and has excavated the stone-cists of Bec-er-Vill.

ON FEBRUARY 8th at the meeting of the Parisian Society of Anthropology M. de Mortillet exhibited and distributed among the members maps he had prepared showing the distribution of all the dolmens in Europe, Asia, and Africa.

MR. JAMES W. DAVIS publishes a lengthy and careful resumé on the relative remains of man in Yorkshire in the Proceedings of the Polytechnic Society of that Shire. His description of the lake-dwellings at Ulrame near Bridlington is interesting as relating to the first remains of that kind discovered in England; it is believed that many of them are older than the Scotch cranoges. The objects found in connection with these remains indicate a peaceful people following agricultural pursuits.

MR. J. R. MORTIMER contributes a paper on the remarkable artificial terrace habitations visible on many of the steep hillsides of the vallies of the Yorkshire Wold, and compares them with similar prehistoric terraces in India.



## BOOK REVIEWS.

*Dictionnaire de la Langue Nahuatl ou Mexicaine*, rédigé d'après les documents imprimés et manuscrits les plus authentiques et précédé d'une introduction; par Rémi Siméon, Citeur de la grammaire Mexicaine du P. André de Olmos. Paris, Imprimerie nationale. 1885. Large Quarto; introd. et gramm. 75 pp.; dict. nah-français. 710 pp.; en deux colonnes.

The extensive volume before us is the fruit of ten or more years' assiduous work by a linguist who previously published portions of the Chimalpahin historic manuscript, the Aztec grammar of Olmos and other articles. A super-

ficial calculation shows that the Dictionary with its two columns on every page contains about 27,000 terms and cross references. This is a very considerable number of words gathered in *one* Indian language, although the majority of them probably possess more than that, considering the enormous power of composing words by affixes and subordination, which we observe in some of them. (The cross references perhaps amount to one-fiftieth of the whole number of items). As a basis for his work, Mr. Siméon took the 1571 edition of Alonso de Molina's Mexican dictionary, this being the only comprehensive work upon the subject. But it had to be remodelled entirely, new definitions to be added and a large number of terms omitted there, as proper names of persons, places, animals, plants, inserted from other sources. All modern lexicographers of scientific attainments insert the derivation of the terms, wherever certainty can be had concerning their origin. Siméon does the same thing, but instead of calling the words pointed out as origins *bases*, he calls them *roots* (*raíces*.) As for the introduction, the grammatic sketch contained in it is not edited according to the modern notions of scientific research, but embodies chiefly the statements and method of Andrea de Olmos, previously edited by our lexicographer. The description of the sounds is incomplete on several points; that the *h* is often pronounced like Spanish *j* and German *ch*, and *tl* like the palatalized *l* (*li*) is not stated. But Siméon is right in exchanging the old fashioned *y* when used as a vowel, for the letter *i*, and omitting the *h* where it is not pronounced. It would have been appropriate to use *u* for the consonantic *u* (in diphthongs, etc.) and to write *uei large* instead of *uei*, *chiwa to make* for *chiua*, *chihua*. But Siméon preferred to keep up the old Spanish orthography of Mexican as much as possible, so as not to render the words almost unrecognizable to readers accustomed to the present orthography of that sonorous language. Others of course would prefer to see a scientific alphabet introduced throughout. To separate the elements in compound words by a hyphen would be a considerable help to students; better write *ome-yollo*, *olol-chiua* than *omeyollo*, *ololchiua*, and keep up this orthography in publishing Aztec texts. The name of the *Chichimecs*, in the singular *Chichimecatl*, is explained by *the one who sucks (at the breast)* from *chichi to suck*; this is not improbable when taken as a sobriquet for a whole people, but it does not take into account the second word *mecatl*, which means (1) *rope*, *cord*, and (2) *concubine*. Words from the older Nahuatl literature are thrown together by Siméon with those of recent authors, and cannot always be distinguished from them, though the author adds his authority wherever he can. The introduction contains a sketch of the art of ideographic writing in use among the Aztecs, which stands in no necessary connection with his subject: also a sketch of the distribution of languages in Mexico, and Pimentel's attempt at classifying them. A man like Siméon ought to know that neither Orozco y Berra nor Pimentel can be trusted in any way on this subject. Why he introduces languages spoken in the United States only, as Caigua,\* Zufi, Mutsun is difficult to see, as they do not in any way belong to Mexico. Pimentel classes Caigua among the Shoshonian languages, separates Waikuru from Cochimi-Laimon and Seri, but classes Yuma, to which these three belong, with Pima! He regards the Tapijulapa as a dialect of the Zoque-Mixe, which by itself is a very problematic association; and counts up obsolete and extinct languages as Sobalpure and Cajuenche as still living. That there is a family Kéres-Zufi, embodying also the Tesuque, Taos, Jemez on the Rio Grande, no ethnologist will probably concede now-a-days, since these languages have become better known. About the worst blunder of Pimentel is the classing of the language of Haiti, which was Carib, among the Maya languages, and it is singular that the Mexican scientists cannot even give a correct subdivision of the dialects belonging to their *most important* linguistic family, the Nahuatl.

A. S. G.

\*The Spanish form of Kiowa, Kayowe.

## EXCHANGES OF RELICS.

L. Simonton, Lebanon, Ohio, will exchange arrow and spear points from the vicinity of Fort Ancient for fine points from Oregon, Washington Territory, California, Arizona, Utah and New Mexico.

W. Hamilton, of the firm of Hamilton & Co., manufacturers of wood type, Twin Rivers, Wis., has a quantity of Pottery in fragments which he has gathered from his vicinity; and which he will exchange for other relics or for Geological specimens.

The editor of the *AMERICAN ANTIQUARIAN* has a number of Swiss Lake Dwellers' relics which he will exchange for carved relics from any part of America.

## The Old Testament Student,

(A MONTHLY.)

Price One Dollar a Year, 10 Numbers.

Editorial Notes on topics relating to the study of the Old Testament.

Articles on the literature, history and theology of the Old Testament.

Ministerial, seminary and college study of the Old Testament.

Sunday School Lessons from the standpoint of the Old Testament.

Book-Studies chapter-studies, verse-studies of the Old Testament.

"Notes & Notices" of work and workers in the dept of the Old Testament.

Characterization and criticism of commentaries on the Old Testament.

Reviews of books and articles relating to the Old Testament.

Discoveries in Oriental countries throwing light on the Old Testament.

Current Literature; books and periodicals, on the Old Testament.

Editor, WILLIAM R. HARPER, Ph. D.

## Hebraica,

A Quarterly in the interests of Hebrew and Semitic Study.

Price Two Dollars a Year.

Managing Editor, WILLIAM R. HARPER, Ph. D.,

Yale University, New Haven, Conn.

Associate Editors:

PAUL HAUPT, Ph. D.,

HERMANN L. STRACK, Ph. D., D.D.

Johns Hopkins University, Baltimore, Md. University of Berlin, Germany.

Address: New Haven, Conn.. P. O. Drawer 15.

The April number of *HENRAICA* contains the following articles:

1. "On the Synonyms Adhah and Jahal," by Rev. Phillip A. Nordell, D. D.
2. "Kottek's Das Sechste Buch des Bellum Judaicum (Syrisch)," by Richard J. H. Gotthei, Ph.D.
3. "The Strophical Organization of Hebrew Trimeters," by Prof. Chas. A. Briggs, D. D.
4. "Cylinders A, and B of the Esarhaddon Inscription," by Robert F. Harper, Ph. D.
5. "Inscriptions of Nebuchadnezzar," by Rev. T. T. X. O'Connor, S. T.
6. "Jewish Grammarians of the Middle Ages, II," by Morris Jastrow, Jr. Ph. D
7. "Mabbul, Nephilim, etc., by Rev. Prof. T. K. Cheyne, D. D.

## B. WESTERMAN & CO.,

—NEW YORK.—

FOREIGN BOOKSELLERS AND IMPORTERS.

## A M E R I C A N A :

*Amerika's Nordwestküste.* Neueste Ergebnisse ethnologischer Reisen (by Badian, Grünwedel, Krause and Reiss) two volumes folio, with 24 plates chromo and Photolithographic Representations of utensils, ornaments, weapons, etc. Berlin 1884, in paper, published \$29.40 for \$18.20

*Meyer & Schmidt.* Die Steinbildwerke von Copan und Quirigua. 20 Photolithographic plates, ground plans, and best o o. Berlin 1883. Published \$19.40 for \$8.00

A few copies can be imported at the above prices for Cash.







THE  
*American Antiquarian.*

VOL. IX.

SEPTEMBER, 1887.

No. 5.

GOLD ORNAMENTS FROM UNITED STATES OF  
COLUMBIA. *U. America*

This series of gold ornaments, kindly loaned me for description by Mr. S. L. M. Barlow and Mr. J. M. Muñoz, were found on the banks of the Mingindo river, a tributary of the Artato, in the state of Cavca, United States of Colombia, South America. With them were also found a number of plain undecorated nose rings that weighed 6, 10, 34, and 38 dwts. respectively. With one exception these nose rings were all about 920 fine. The only history coming with them was that they were brought in by a negro woman who had found them in a grave and who sold them for their simple gold value to the person who brought

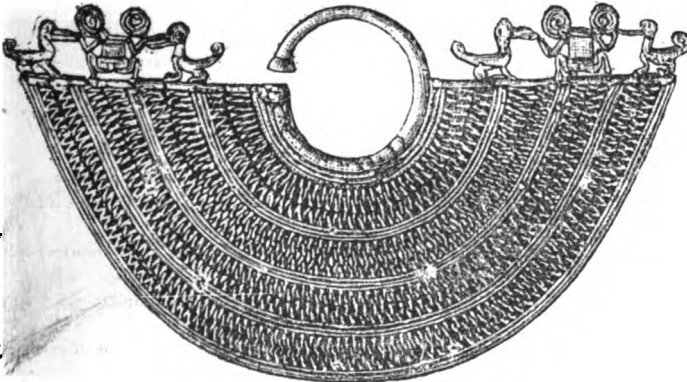


Fig. 2.

them to the United States. The largest is a decorated plaque ornament measuring 7 9-16 inches (20 cm.) across and weighing 5 oz., 13 dwts (193 grammes). See Fig. 1 It was evidently used as a

breast ornament or as the centre of a shield, being attached with nails or suspended by a string as the case required, by means of two small holes near the upper part. The general appearance of the ornament is that of an attempt at a moonlike face, and the style of workmanship does not vary much from that of the gold object

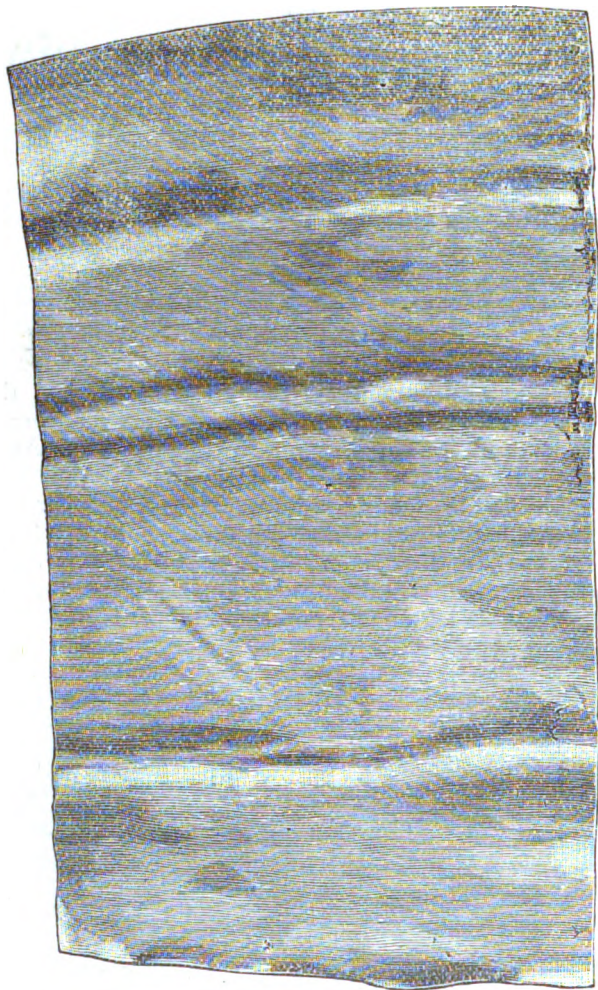


Fig. 3.

No 2 from the Florida mound described in a former paper. There are three raised ridges or lines around the shield, that bend and geniculate, as it were, at the upper end, running down the center of the shield very nearly to the two raised rings with central dots, that seem to have been intended for eyes. Another raised ridge



Fig. 4.

runs around the outside of all these, the raised disk in the center seeming to be the point from which they take their direction. This interesting piece belongs to Mr. S. L. M. Barlow.

A banker of South America informed Mr. Barlow that he had purchased full one hundred of these shield-like ornaments simply for their bullion value, and then melted them and sold them as such, and that of all these no drawing or record had been kept. The abundance of these and other gold ornaments which have for nearly three hundred years been taken from this part of South America, cannot but lead us to conclude that the time when they were worn was truly a golden age.

The nose ring is a beautiful piece of aboriginal work, weighing 26.5 grammes 17 dwts. It is  $3\frac{3}{4}$  inches (83 mm.) long, 2 1-10 inches (52 mm.) wide. See Fig. 2. The ring can be readily bent on one side, and then adjusted to the nose, and in a semicircle below this are arranged four rows of a woven, gallery-shaped net work of gold wire, between which and the outside of each of the galleries are three straight wires of gold to which the galleries are attached. On the top of this semicircle, on each side of the ring to fit in the nose, is arranged a row of three figures made of a single piece of gold wire skilfully twisted into shape. The center figure of the trio is a human-like object with each arm extended out and joined to the bill of a duck-like object, there being one group of these figures on each side of the central ring.

A flat plate of gold found among these objects, 7 cm. wide ( $2\frac{3}{4}$  inches) and 12.5 cm. long (5 inches) is only a remnant of what was originally a belt long enough to encircle the waist. It is quite thin, bends readily, and is wholly devoid of ornamentation. See Fig. 3. A number of practical silversmiths who have examined it believe that it was rolled, in fact that it could not have been made in any other way, but a gold worker suggested that it might have been beaten out between two pieces of leather. How this could have produced so even and uniform a strip, and by what means they rolled it, if indeed they did, are not known.

A curious chain is also in Mr. Barlow's possession. It weighs 8 ounces 18 dwts (89 grammes), is over two feet long, and is composed of crescent-like pieces with round eyelets at both ends working in small round links by which they are connected together without the use of solder, forming a very strong chain.

An interesting gold ornament from the United States of Colombia, evidently used for a brooch with a raised figure of the virgin and child, said to be eighteenth century work, was identical in workmanship with Fig. 2.

GEO. F. KUNZ.

New York City.

DECREASE OF POPULATION AMONG THE INDIANS  
OF PUGET SOUND.

*H. A. Huntington Esq.*

FOURTH PAPER.

POPULATION AND CAUSES AFFECTING.—These Indians have greatly decreased since the coming of the whites, though reliable data are very difficult to obtain. The earliest census of which I can learn was made by Captain Wilkes in 1841, but it comprises only a part of the tribes on the Sound. His estimate was 2920 persons. The next was a census by Dr. W. F. Tolmie and comprises the tribes on the east side of the sound, who numbered according to it 2889 persons. Dr. Gibbs, in 1855, gives a complete census by tribes and bands taken when the treaties were made, when his number is 6374. The first census published in the report of the commissioner of Indian Affairs to which I have had access is that of 1862. I append also those for 1871, 1878, 1881 and 1885, from the same authority. I annex a table which gives all of these, so that they can easily be compared. In preparing it I have found some difficulty because some of the names used forty years ago were so different from those now used, but I have done the best I could. It is however quite unsatisfactory. The earlier census of 1841 and 1844 are incomplete. It is probable also that those of 1862, 1878, and 1881 are too high in some of their estimates, while that of 1885 is too low, as in some cases the latter only reports the Indians on the reservations and actually under the control of the agents, while a large number are off the reservations, not under their control and so not reported by them. It is likewise unsatisfactory to trace any one tribe, as, owing to the reservation system they have removed some, and become divided and mixed up, parts of the tribes of thirty years ago going to one reservation, part to another, and parts are not on any. Most old settlers among the Twanas and Clallams, with whom I have conversed, estimate that twenty-five years ago there were from two and a half to five times as many Indians as there are now. Though this may be exaggerated, yet there certainly has been a great decrease. Some of the tribes, too, which seem to hold their own quite well have not actually done so. The Puyallups are an instance of this. The mortality among them during the past few years has been great, but immigration has kept

up their numbers, owing to the value of the land on their reservation, which can be obtained by outside Indians as the former owners die,

	1841	1844	1855	1862	1871	1878	1881	1885
<b>Treaty of Medicine Creek.</b>								
Puyallups. ....	500	325	893	1150		606	547	560
Squaksons. ....		135				100	91	120
Nisqually. ....		200				278	158	180
Upper Chehalis...	200	207	216	300		205	165	190
<b>Total .....</b>	<b>900</b>	<b>1230</b>	<b>1109</b>	<b>1450</b>	<b>1650</b>	<b>1189</b>	<b>961</b>	<b>1050</b>
<b>Treaty of Point Elliott</b>								
Snohomish. ....		695	997	3400				467
Swinomish. ....	650	195	1475	700				222
Lummi. ....	300	244	680	1300				248
Port Madison ....		525	807	1000				142
Exec. Order	150							
Muckleshoot ....								
<b>Total .....</b>	<b>1100</b>	<b>1659</b>	<b>3959</b>	<b>6400</b>	<b>3383</b>	<b>2900</b>	<b>2817</b>	<b>1164</b>
<b>Treaty of Point No Point.</b>								
Twana .....	500		290	450		250	243	†201
Clallam .....	*420	1500†	926	1300	}	550	481	380
Chemakum.....			90	100				
<b>Total .....</b>	<b>920</b>	<b>1500</b>	<b>1306</b>	<b>1850</b>	<b>825</b>	<b>800</b>	<b>724</b>	<b>581</b>
<b>Grand Total.....</b>	<b>2920</b>	<b>4389</b>	<b>6374</b>	<b>9700</b>	<b>5985</b>	<b>4889</b>	<b>4502</b>	<b>2795</b>

*Causes affecting the population.*—Until within a few years intemperance has been one of the greatest foes to the lives of these people. The Clallam head chief, Lord Jim Balch, said a few years ago that five-hundred Indians had been killed within twenty years by the saloons of Dungeness. This is probably an exaggeration, nevertheless the mortality has been very great. Consumption and the diseases consequent upon licentiousness have caused the death of a large number. At an early day small-pox killed many, while whooping cough and the measles have swept off many of the children. All of these diseases, except consumption, which is caused largely by the damp climate, have been introduced by the whites. Many have died from diseases caused by the transition from a savage to a civilized life. Especially has this been the case among the children. A permanent house with a floor is built for them. The old fashioned house with the ground for a floor drank up the grease as it was spilled and if it became too filthy it was easily removed a short distance, but the new house is too costly to be removed, while its floor which has far too much dirt, grease, and saliva, cannot absorb it, and a

\* A census of about half the tribe.

† Census of Mr. Findlayson of the Hudson's Bay Company in 1845.

‡ The census of 1886 made 223 Twanas.

poisonous air emanates therefrom, which often causes the little ones, weak by nature, who have to lie in it, to waste away, even when it is difficult to tell what disease has hold of them. Thus many have died. They naturally love to be in the water or to go somewhere even though it may rain heavily. When they went barefoot this was felt but little, but when they put on socks and other clothes, and wet them, they are not always careful to dry them, and so colds, rheumatism, and consumption are far more common and fatal than when they were uncivilized.

As the subject of the increase and decrease of the Indians has been quite widely discussed of late, I submit the following ideas: On first contact with the whites they decrease; if the tribe is large and kept together somewhat compactly, and there is comparatively little intercourse with the whites, except on the outer edge, and wholesome efforts are made to civilize them, they do not diminish rapidly, and when somewhat civilized they begin to increase as Drs. Riggs and Williamson testify of the Dakotas, and has been the case of the large tribes in the Indian Territory. But where the tribes are small and the intercourse with worthless whites is considerable, their decrease is rapid, and sometimes a tribe will become extinct before it has time to rally. This has been the case with the Chemakums, many tribes in the Wallamet valley of Oregon, and in the states east of the Mississippi. In this respect each tribe is somewhat like an army when fighting for its own existence. If it can hold its own a certain length of time it may conquer, but if it is small and the attack severe it is cut to pieces.

*Physical nature.*—In 1875 with the assistance of Dr. R. H. Lansdale, and Mr. E. Eells, U. S. Indian Agent, eleven Twana men were measured and weighed, and the following table is the average, both before and after deducting what we thought to be right on account of clothes, hair, etc., and also the extremes under each head.

	Before deducting.		After deducting.	
	Average.	Extremes.	Average.	Extremes.
Weight.....	151 7-11 lbs.	124½ lbs.—174½ lbs.	142 lbs....	114 10-22lbs-164 10-22lbs
Height.....	5 ft. 6 in....	5 ft. 3¾ in.—5ft. 9 in.	5 ft. 5 in....	5 ft. 2¾ in.—5 ft. 8 in.
Circumference of head.....	21 8-11 in....	21 in.—23 in.	21 in....	20 3-11 in.—22 3-11 in.
Circumference of chest.....	35 3¼-11 in.	32 in.—38 in.	34½ in....	31 2-11 in.—37 2-11 in.
Circumference of pelvis.....	35 2¼-11 in.	33¼ in.—37 in.	34 in....	32 3-11 in.—35 8¼-11 in.
Circumference of arm.....	10 2-11 in....	9 in.—11 in.	10 in....	8 9-11 in.—10 9-11 in.
Circumference of forearm.....	9 5-11 in....	8½ in.—11 in.	9 3-11 in....	8 2¼-11 in.—10 9-11 in.
Circumference of thigh.....	18¾ in....	17 in.—20 in.	17 in....	15¼ in.—18¾ in.
Circumference of leg.....	13½ in....	12 in.—14½ in.	13 in....	11¼ in.—14 in.
Length of upper extremities.....	.....	.....	27 8-11 in.	26 in.—30 in.
Length of lower extremities.....	.....	.....	31 3-11 in.	29 in.—34 in.
Length of trunk.....	.....	.....	23 7-11 in.	22 in.—25 in.

The color of the hair and eyes is black. As to blushing they are similar to white people but not so sensitive; as to muscular



strength and speed they are inferior to white people, but in regard to climbing they are superior; their growth is attained early in life, and their decay also begins early; their child-bearing is generally very easy, though there are occasional exceptions; their reproductive power is less than with white; sterility prevails considerably, caused in early life by various kinds of abuse; the age of puberty with the males is not far from fourteen, and with females at about thirteen; they cross with all races, and we have some half negro and half Indian children, and one who is half Chinaman and half Indian; their teeth come about the same as with white children, but wear down early in life and the more they become civilized, owing perhaps to the sugar and syrup which they eat, the more they decay. There are a few gray people and a few partially bald, and yet but few of either, owing to their freedom from mental care and strain, their out-door life and the bareness of their head from covering. Their length of life is probably ten years less than with whites, at least that was Dr. Lansdale's opinion, and I agree with him. In 1880 I was employed to take the U. S. census among the Clallams, and was surprised to find how much younger most of them were than they looked to be. Although very few of the older ones knew their ages, yet all could tell how large they were when the treaty was made, twenty-five years previous, from which I could make a fair estimate. In only one or two cases did I guess them to be younger than they were. One man whom intimate acquaintances had judged to be sixty was found to be about forty-five.

*Diseases.*—The principal diseases are scrofula, consumption, bleeding at the lungs, scrofulous swellings and scrofulous abscesses, all of which are grafted on a scrofulous diathesis. They are also largely troubled with acute and chronic bronchitis, catarrh, diarrhœa, dyspepsia, conjunctivities, skin diseases, syphilis, gonorrhea, tooth-ache, and chronic rheumatism. Their diet, habits, and the climate have produced a scrofulous diathesis from generation to generation, thus shortening their lives. The dampness of the climate also produces rheumatism and consumption. The above facts were given me by Dr. R. H. Lansdale, for a time agency physician at Skokomish.

An examination of the reports of the Commissioner of Indian Affairs for 1883-4-5, gives the following figures in regard to the diseases treated by the three physicians on the main Sound, namely, at the Tulalip, Puyallup, and Skokomish agencies: Total number of cases treated, 4599; of these eighteen per cent. were miasmatic diseases, including fevers, diarrhœa, and tonsillitis, one and one fourth per cent. were enthetic diseases, as syphilis, and gonorrhea, nine per cent. were diathetic, of which rheumatism was by far the most common; four per cent. were tubercular, as consumption and scrofula; one per cent were parasitic as worms; eight per cent were nervous diseases, of which headache was the

most common; thirteen per cent were diseases of the eye; one and three quarters, of the ear; one quarter of one per cent, of the circulation; nineteen per cent. of the respiratory organs, of which bronchitis was the most common; eight per cent. of the digestive organs, diarrhoea being the most general; one and one-half per cent. were of the urinary and genital organs; one and one-quarter per cent. were diseases of the bones, nearly all being of the teeth; seven per cent were skin diseases; and seven per cent were wounds, injuries and accidents. Of the whole number sick 134 died—nearly three per cent.

Cuts and wounds heal easily. Scrofulous diseases are very difficult to cure. They are not near as sensitive to pain as the whites; they will cut themselves in their religious ceremonies, with apparently little suffering, while the same wounds would throw a white person into a fever; and they can easily endure a number of fleas which would torment a white person beyond endurance. I have known very few who were deformed. Three Clallams have been hump-backed, two of whom died while children. A solitary case of insanity is recorded—a Clallam. The report was that in early life while he was chopping a tree fell on his head, and split it open so that some of his brains ran out, but he recovered. In after years he was considerably addicted to drinking and for this reason he was removed from Port Discovery to the Skokomish reservation in the winter of 1880. Some months previous to this removal it is said that he showed some signs of insanity for a few weeks and for some months after it whiskey was kept from him. In July 1881 he became insane, after having secretly obtained some whiskey. He was doctored both by the Indian medicine men and the Agency physician, but was not cured. He was then allowed to return to Dungeness, but he died soon after. I have known of only two cases of suicide, both of whom were women. One was an aged Clallam of Dungeness, who had some unhappy troubles with her husband, which caused her to hang herself; and the other a young woman of Port Madison who was compelled by her relatives to marry a man whom she did not wish, and she likewise hung herself.

*Flatheads.*—The custom of flattening the heads by pressure was about universal amongst these Indians. It was done in infancy with a pad made of cedar bark, beaten, pressed steadily on the forehead. It has been so often described by numerous writers that no further description is here necessary. School teachers here have been unable to see any difference between the intellect of those whose heads have thus been flattened and those which are natural, which could be attributed to this cause. Some of the Indians, however, believe that it has caused numerous headaches among them in after life. Very few infants are thus treated now.

*Mental Phenomena.*—In school the children acquire, on an average, as rapidly as white children in the same school who have had the same advantages in primary lessons, but do not progress as well in the more advanced studies, as a general thing. Heredity seems to have its influence.

Their memories are generally better than those of white people, but their reasoning powers are usually much poorer, though occasionally they reason very sharply. The strength of will among a few is quite great, and these become leaders, but that of the common people is not very much.

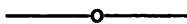
In tracking game, and obtaining fish they have a large amount of patience and good habits of observation. Generally they are quite industrious, and a trip over the Skokomish reservation on a pleasant day shows most of the men at work; on rainy days they can do less, but rain or shine the women are generally busy.

Their moral ideas were formerly quite low, especially in regard to theft, lying, murder, intemperance, and chastity, but of late years they have greatly improved. Formerly they would *say* it was wrong to steal, but if not found out it was apparently all right. Now there are very few who are ever accused of stealing, and murders have of late been almost unknown. Lying is much more common. In regard to chastity and intemperance they have improved much, and there is still room for great improvement. In different localities these vices abound more or less, according to the place, there being much less on the reservations than off of them. Their emotions and passions are generally strong, though not always lasting.

*Progress.*—While this subject shows the character of the Indian mind, it is so large that it cannot well be described here in detail. Very frequent remarks on it will be made in connection with the various subjects treated in the following pages. Still to a missionary, like the writer, whose time is devoted to it, it has seemed so large that he has described it in a separate volume entitled "Ten Years at Skokomish," published by the Congregational Sabbath School and Publishing Society at Boston, Mass., to which the reader is referred for much that is of value of this class of ethnological facts.

Skokomish, Wash. Ter.

M. ELLS.



## THE "CREATOR" IN THE RELIGIONS OF THE EAST.

The idea of a creator as presented by the various religions of the east is the subject which we have set before ourselves for consideration in this paper. Our points of inquiry are: first, was the doctrine of a creator taught by the systems of religion which

we may call the historic faiths. Second, if the doctrine was so prevalent among the early historic faiths does it not seem reasonable that some such conception obtained among the prehistoric races. Third, if the idea of the creator was in any way transmitted from the prehistoric to the historic times, how do we account for it in the former period? Was it the result of an early revelation, the memory of which was still retained or was it the result of the moral constitution of men, all races having "seen darkly" but still apprehending something of the same fundamental truth which is taken for granted in the sacred scriptures. With these enquiries by way of introduction we proceed to review the different systems to learn from them which the conception of God was among the ancient oriental races.

It is a conclusion of the reason. The ancient religions all proclaim the fact of creation and hold God to be the creator.

Among the ancient Egyptians Kneph was the divine spirit or soul considered as forming the scheme of creation. His name is, by some considered etymologically the same with the Egyptian word "breath"\* which is *nef*; and curious analogies are traced between him and the third person of the Holy Trinity in the Christian system.† As "the spirit of God" at the time of the creation moved upon the face of the waters; so Kneph is represented as the deity who presided over the inundations. As the heavens were made by the breath of God's mouth," so *Kneph* is called the God who made the sun and moon to revolve under the heavens, and above the world, and who has made the world and all that is in it.‡

Phthah, whom the Greeks identified with their Hephaistos and the Romans with their Vulcan was a creator of a more vulgar type than Kneph or Khem. He was an artizan God, the actual manipulator of matter and maker of the sun, moon and earth.§ "He is called the Father of beginnings," the first of the Gods of the upper world, "who adjusts the world by his hand, the lord of the beautiful countenance and the lord of the truth."|| He is also defined by an ancient writer as a god who creates with the truth.¶ We thus find in the religious teaching of the ancient Egyptians many ideas on the subject of creation not materially unlike the views presented in the Jewish and Christian Scriptures, and as such they confirm these inspired records.

The first form of Egyptian Religion was monotheism. They worshipped one God as supreme, and other Gods as inferior or as forms in which the supreme God manifested himself.\* The sun worship, nature worship, and animal worship grew up in this

\*Bunsen Egypt's Place, Vol. I, p. 375.

†Wilkinson, Ancient Egyptians, Vol. IV, p. 236.

‡Bunsen, Vol. I, p. 377.

§Recurus of the Past, Vol. VIII, p. 5-15; Birch Guide to British Museum, p. 13.

||Ancient Religions, p. 19.

¶Iamblichus. "De. Mystereis," 8:3. Herod, III, 37.

\*The Religion of the Ancient Egyptians, by LePage Kenougb.

way. God reveals himself in the sun, and plant and animal life, and these three forms of divine activity became objects of worship.

In the religion of the Assyrians and Babylonians we have a well defined doctrine of creation. Ra or Il was the supreme God in Babylonia, and Asshur in Assyria, and in immediate succession to these we find in both countries a triad consisting of Anu, Bel and Hea or Hoa. These three are called *par excellence*, "the great Gods." \*In invocations their names follow immediately after the names of Asshur and this is their usual and proper position.†

It has been conjectured‡ that in this triad we have a cosmogonic myth, that the three deities represent, Anu the primordial chaos, or matter without form; Hoa, life and intelligence considered as moving in and animating matter, and Bel the organizing and creating spirit, by which matter was actually brought into subjection, and the material universe arranged in an orderly way. It is the opinion of Dr. Rawlinson "that Anu, Bel, and Hoa, were originally the Gods of the earth, of the heavens, and the waters, thus corresponding in the main with the classical Pluto, Zeus or Jupiter and Neptune who divided between them the dominion over the visible creation."|| Anu is commonly spoken of as the old Anu, the original chief, the King of the lower world and the lord of spirits and demons.§ Bel is "the God of Lords," "the creator," "the mighty prince," and "the just prince of the Gods." In the history of creation we are told that Bel made the earth and the heaven, and formed man by mixing his own blood with the earth.¶ Hea or Hoa, the third God of the first triad ranks immediately after Bel in complete list of the Assyrian deities." He is called the King, the great inventor and the determiner of destinies. In the legend of creation he is joined with Bel in the office of guardian and watches over the regularity of all the planetary courses.\* In the opinion of many theological writers we have in this and other divine triads found in the ancient religions the evidence of the existence among men of a general faith in a *divine trinity*. Some believe that the doctrine of the trinity was originally revealed to man, and has been transmitted to the race by tradition. Others hold that as a common faith it has grown out of the nature and wants of our common humanity and is therefore a doctrine of natural religion, like the existence of God and the immortality of the soul. In either case it is claimed the divine triads found in so many of the ancient religions confirm the Biblical doctrine of a trinity of persons in the unity of the infinite nature. In direct succession to the three

\* Records of the Past, Vol. VII, p. 121.

† Records of the Past, Vol. III, p. 83; Vol. V, p. 29; Vol. VII, p. 7.

‡ See Lenormant, Manuel d'Histoire Ancienne, V. I. II, pp. 182, 183.

|| Ancient Religions, p. 39.

¶ Tiglath Pileser I, Records of the Past, Vol. V, p. 24.

§ Berosus ap Euseb. Chron. Can. I, 3.

\* Records of the Past, Vol. IX, p. 118; Ancient Religions, p. 41.

Gods of the first triad Anu, Bel, and Hoa, we find a second still more widely recognized triad, comprising the moon God, the Sun God and the God of the atmosphere. There is great difference of opinion with respect to the name of the last God of these three which is never spelt phonetically in the inscriptions, but only represented by a monogram. He has been called Iva or Yarkel, Bin, Yem or Im, and recently Rimmon.\* The names of the members of this triad as given by Henry Rawlinson, George Smith, and Fox Talbot are Sin, Shamas, and Vul—the Gods respectively of the moon, the sun, and the atmosphere. It is a fact to be noticed that in Assyria and Babylonia the Moon God took precedence of the Sun God. Sin is called the chief of the Gods of heaven and earth, the King of the Gods, and even the God of the Gods. Shamas, the Sun God occupies the middle position in the second triad. In a general way he is called the establisher of heaven and earth, the judge of heaven and earth.

Vul, the god of the atmosphere, who completes the second triad has on the whole a position not inferior to Sin and Shamas. Some kings appear to place him on a par with Anu or with Asshur. He corresponds with Jupiter Tonans of the Romans, being the prince of the power of the air, the lord of the whirlwind and the tempest, and the wielder of the thunder bolt. His most common titles are the minister of heaven and earth, the lord of the air and he who makes the tempest to rage. These works identify him with creation and providence,

In the religion of the ancient Iranians we have a divine dualism. By dualism we mean a belief into two original uncreated principles, the one good and the other evil.† This creed was not, perhaps, contained in the teachings of Zoroaster himself, but it is developed at so early a date out of that teaching that in treating of the Iranian religions we must necessarily regard dualism as a part of it. The Iranians of historic times held that from all eternity there had existed two mighty and rival beings, the authors of all existences, who had been engaged in perpetual contest, each seeking to injure and baffle the other. Both principles were real persons, possessed of intelligence, will power, consciousness, and personal qualities. To one they gave the name of Ahura Mazda, to the other Angro-Mainyus.‡ Ahura-Mazda was the all-bountiful and all-wise living being or spirit, who stood at the head of all that was good and lovely, beautiful and delightful, and the creator of all good. Angro-Mainyus was the dark and gloomy intelligence and the creator of all evil, sin and pain.§ This doctrine of divine dualism doubtless originated in the effort of the human mind to explain the existence of good and evil in the world. Such various and conflicting phenomena as good and

\* Transactions of the Society of Biblical Archaeology, Vol. V, p. 441.

† Ancient Monarchies, Vol II, p. 51.

‡ Lectures on Religion, p. 171.

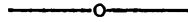
§ Ancient Monarchies, Vol. II, p. 48-9.

evil, sin and holiness, joy and sorrow could not spring from one and the same creative cause, therefore there are two creators. This doctrine resembles the biblical doctrine of God and *Satan or the Devil*.

The biblical doctrine as presented in theology does not affirm the past eternity of the evil principle and person; but the churches very largely affirm their future eternity. We find these dual principles in nature, life, experience, history, and theology today; and religious dualism in a modified form is believed and taught now.

To the pantheist good and evil are different sides of the divine nature life and character who is the one and the all. To the rational theist evil had its origin in the free act of man and not in the will and purpose of God. While evil exists, it is under divine control and will be over-ruled for good. It is not infinite, but finite. It is not of divine, but of human origin and can not exist as a state of internal war under the divine government.

WM. TUCKER.



### SOME PROBLEMS IN CONNECTION WITH THE STONE AGE.

The study of Archæological relics has this benefit attending it, that, like the study of specimens of every kind either in Botany or Zoölogy, Geography or other department of science, it lays the foundation for the science. It is a noteworthy circumstance that the beginning of archæology as a science was in connection with the discovery and collection of certain relics.

This was in Denmark. Here the first data of science were gathered and in connection with the Museum of Northern Antiquities the foundation of what may be called Pre-historic Archæology was laid. An immense collection of specimens had been gathered from some very interesting shell mounds, which at first were supposed to be raised beaches, but which afterward proved to be the debris of camps or, as the Danes expressed it, "kitchen heaps," Kjøkkenmoddings." The discovery of rude flint implements and of bones bearing the marks of knives confirmed the supposition that these beds were artificial deposits—the remains of camps—the sites of ancient villages. In many places hearths were discovered consisting of flat stones, "platforms" bearing the marks of fire beds; the shells and bones having accumulated around the tents and huts, making what was properly a kitchen midden. More than fifty of the deposits were carefully examined, many thousand specimens were collected and deposited in the museum at Copenhagen, and Prof. Steenstrup, Prof. Worsaae, and Prof. Forchhammer—the

committee appointed for the purposes, proceeded to examine and classify these relics and make reports. Six reports were presented to the Academy of Science at Copenhagen, the final report having been made about the year 1860. Previous to this, however, Prof. Thomsen had been examining the peat bogs and barrows of Sweden and had gathered from them many specimens of ancient workmanship, (Prof. Thomsen may be said to have created the museum,) so that the data were furnished not only by the shell heaps but by barrows and peat-bogs as well. It was, however, owing to the analytic mind of Prof. Worsaae, who may be called the father of archæology, that the classification of the relics according to the so-called ages, was introduced. Prof. Worsaae divided the stone implements into two classes; those belonging to the older stone age, (Paleolithic, or Archæolithic,) and the later or new stone age, (Neolithic). The relics of the older stone age, consisted of the stone implements which were found in the drift and the caves with the remains of extinct animals, and the remains of the Neolithic age from the coast finds or kitchen-middens. Prof. Steenstrup, however, considered that the relics from the kitchen-middens and those from the barrows or tumuli were contemporaneous, and though he admitted that they were much ruder, he classified them with the new stone age.

This position soon became established and the division was into the relics of the rude stone age or Paleolithic age which were said to be gathered from the drift gravel beds and those of the polished or Neolithic age, which are mainly gathered from shell heaps, barrows or tumuli. It was, however, through the examination of the tumuli that Sir R. Colt Hoare was first induced to adopt another classification of relics. It was discovered that the tumuli not only contained stone relics but many specimens of bronze, and it was supposed that a new race introduced the bronze period, and so the bronze age came to be known.

Instead of the simple and uniform implements and ornaments of stone, bone and amber, (Prof. Worsaae says,) we meet suddenly with a number and variety of splendid weapons, implements and jewels of bronze, and sometimes, indeed, with jewels of gold.\*

The introduction of the Iron Age was later. It was owing to the discovery of relics which was as follows: An old battle field was discovered near Berne and described by Mr. Jahn. On it were found a great number of objects made of iron, such as chariots, bits for horses, pieces of coats of mail, arms of various sorts, including no less than a hundred two-handed swords. There was also an interesting "find" of articles in the peat-bogs of Slesvick and described by M. Englehardt, Curator of the Museum at Flensburg. This "find" comprised helmets, shields,

---

\*Pre-historic Times; p. 152.



breast-plates, coats of mail, buckles, sword-belts, sword sheaths, one hundred swords, five hundred spears, thirty axes, forty awls, one hundred and sixty arrows, eighty knives, wooden rakes, mallets, vessels, wheels, pottery, coins, etc. In the summer of 1862, M. Englehardt found in the same bog, a large flat-bottomed boat, 70 ft. in length, 3 ft. deep, 8 or 9 ft. wide; sides of oak boards overlapping one another and fastened together with iron bolts. The row locks were made of wood; there were about fifty pairs of oars, sixteen of which were discovered. The freight of the boat consisted of iron axes, swords, lances, and other relics, and the conclusion was that these marked the introduction of the Iron Age.

Thus we learn that the study of relics gave the term age to the world. The classification of all the tokens of pre-historic times became subject to that of the relics. The division of the relics according to material of which they were composed became a fixed rule.

There was, to be sure, an effort on the part of certain archaeologists to introduce other systems of classification; though none of them broke down this one, or took its place as a substitute. In Europe the barrows or tumuli first became the object for investigation, and their contents were noted. It was found that the body in the tumuli was sometimes buried in a contracted posture, sometimes in the recumbent posture, and that the barrows corresponded; the short barrows containing the contracted and the long barrows the recumbent body, and the effort was to make this distinctive of a subdivision of the Stone Age. In the Bronze Age, the body was always supposed to be burnt, and the barrows of the Bronze Age were described as having no circles of massive stones, no stone chambers, in general no large stones on the bottom; but they consisted of mere earth mounds with heaps of small stones with occasionally stone cysts placed closely together, and in a few instances a small circle of stones surrounding the mound. The dolmens and cromlechs were supposed to belong to the Stone Age, but rude stone monuments to the Bronze, and so a classification according to monuments and remains seem likely to obtain. This theory was, however, overthrown by the discoveries in the "Lake dwellings," for it was ascertained that some of the Lake dwellings contained stone relics in great abundance and very few bronze relics, while other dwellings or villages, especially those which were situated on what may be supposed to be the lines of ancient travel where an advanced stage of culture would appear, abounded with bronze relics in association with stone relics. And yet, so far as could be ascertained from an examination of the different localities, both classes of dwellings were contemporaneous: The Swiss lake dwellings seem first to have attracted attention during the dry winter of 1853 and '54, when the lakes and rivers sank lower

than had ever been previously known. Dr. Ferdinand Keller, of Zurich drew up a series of instructive memoirs illustrated with well executed plates of treasures in stone, bronze and bone, brought to light in these sub-aqueous repositories. The Swiss archæologist found abundant evidence of fishing gear, consisting of pieces of cord, hooks, and stones used as weights. A canoe also made of the trunk of a single tree 50 feet long and  $3\frac{1}{2}$  feet wide, was found. It was supposed to have been laden with stones such as were used to lay the foundation of some of the

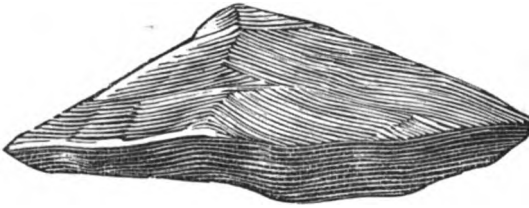


Fig. 1.—RELICS FROM SURFACE. READING, PA.

artificial islands, or crannogs. Carbonized apples, and pears of small size; stones of the wild plum, seeds of the raspberry, blackberry, and beach nuts; carbonized wheat and barley; remains of cloth not woven but plaited, were also discovered. Many animal remains were found embedded in the mud; eighteen species of birds, the wild swan, goose, and two species of ducks. Twenty-four species of mammalia, including the bear, marten, poll-cat, ermine, weasel, otter, wolf, fox, wild-cat, hedge-hog, squirrel, field-mouse, beaver, wild boar, swamp hog, stag, roe-deer, fallow-deer, elk, ibex, chamois, lithuanian bison, and a wild bull; besides the domestic animals such as the dog, horse, pig, goat, sheep, and several varieties of oxen and cows. It was ascertained that the domestic animals abounded in what were called the early settlements, that is, the settlements where stone relics only were discovered. But at the same time the wild animals were numerous, such as the fox, stag, and roe. It was supposed that in these the habits of the hunter state predominated over those of the pastoral and that wild animals were used as food. The theory was advanced that there was a transition, the tame pig having replaced the wild boar, and the hunting dog having supplanted the fox. But the wild bull survived, the lake dwellers having succeeded in training that formidable brute. There were not enough skulls or skeletons to determine the race which occupied the lake dwellings. Nor were there enough data to show the period or time in which they were occupied.

In the lakes of Ireland were found many artificial islands, some of them were called crannogs; others stockaded islands, the crannogs being distinguished by having a stone wall around them and the interior being filled with dirt. The Palaffittes or

lake villages were merely platforms placed on wooden piles, but without the solid sub-structure. A log cabin was discovered by Capt. Mudg, R. N., in 1833, in Drum Kellen bog, at a depth of 4 ft. from the surface. It was 12 ft. square and 9 ft. high and divided into two stories, each 4 ft. high. This log cabin was wrought with the rudest kind of implements; the wood was bruised by a blunt stone chisel; the chisel was found lying on the floor and with it a slab 3 ft. long and 14 inches thick, in the center of which was a pit such as have since proved to be common in many parts of the world. The logs had been hewn by a large instrument in the shape of an ax. Of the relics which were discovered in the Swiss lake dwellings and the Irish crannogs there seems to have been quite a variety. Some are exclusively of the stone age, others of the bronze age. In the Lake Moose-

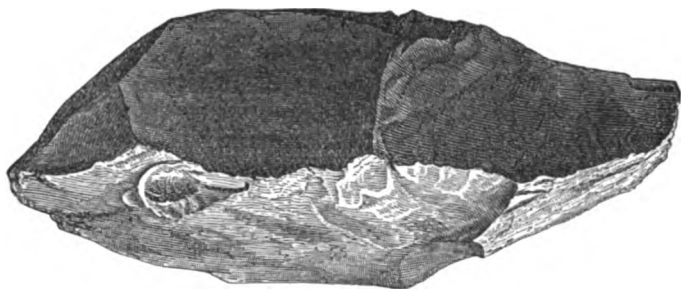


Fig. 2.—RELIC FROM THE SURFACE, READING, PA.—A. F. BERLIN.

dorf were implements of stone horn and bone, but none of metal were obtained, but hatchets and wedges of jade and pieces of amber which would indicate that trade was carried on with the inhabitants of the far East and those dwelling on the shores of the Baltic. The lake dwellings of Switzerland were mainly found at Constance, Zurich, Geneva, and Neufchatel, though there were others at Robenhausen, Moosedorf and Lake Bienne, which yielded many valuable relics. It was supposed that the settlements of the bronze period were confined to Western and Central Switzerland, and those of the stone period to the eastern lakes. In a few of the stations iron implements were discovered and works of art, including coins and metals of bronze and silver, which belong to the first or pre-Roman division of the age of iron. It was a question whether any of the repositories of ancient relics in Ireland can be said to go back so far even as the latest of the Swiss lake dwellings or that the Swiss settlements go as far back as the shell heaps of Denmark. Cereals and domestic animals were found in them, but they were absent from the shell mounds. Still the identification of the stone age with shell mounds, and that of the bronze in a general way with the Palaffittes or Lake dwellings was plain. Thus the three-fold division, the

paleolithic having for its tokens relics from the gravel bed; the neolithic having tokens from the shell mounds, and the bronze from the lake dwellings, became well established, while the relics from the caves, from the barrows or mounds, and from the rude stone monuments became distributed into the midst of the other specimens according to the material of which they were composed, and according to the depth of the horizon in which they were found.



Fig. 3.—PALEOLITHIC FROM GRAVEL BEDS AT TRENTON.—DR. C. C. ABBOTT.

The discoveries among the peat-bogs next introduced a classification. It was noticed that the relics which were found in the peat-bogs at different depths were correlated to the trees which grew about them. It was supposed that the Scotch fir was supplanted by the common oak and the oak by the beech tree, and that the different relics could be associated with the different forests; the stone with the Scotch fir; the bronze with the oak, and the iron with the beech. This however proved to be a very transitory system. There was more theory about it than fact, though it helped to fix and define the ages and to reveal the successions of populations.

It would seem that the archæologists of Europe, after much discussion and careful research finally established this fact, that the material of which the relics were composed was a fair and pretty sure indication not only of the degrees of progress which had been reached in prehistoric times, but also of the order of time, and no subsequent discovery has overthrown this position.

The conclusions reached from this history of the relics are as follows:

1st. That the three primary divisions, the stone, the bronze and the iron periods, are well founded. The arrangement is warranted alike by evidence and by its practical convenience;

though later research has given to the stone period a comprehensiveness unthought of before.

2nd. The ages established must be regarded as indicative of the different stages through which prehistoric art passed, and in a general way may be taken as giving a clue to the periods or successions in time.

3rd. In Europe the division of the palaeolithic from the neolithic age has enough definite and fixed data upon which it may be based to give it acceptance with all.

Still it is a question whether American archæologists are to accept these conclusions as applicable to the continent which we inhabit, and whether we are to regard the division and classification which has become established in Europe as the one which we can use here.

We acknowledge that as in the department of geology, the Europeans gave us a system which, with certain modifications, has proved a good working plan for this continent; so in archæology we may suppose that the system which has been worked out with such patient care may prove useful, yet we can by no means regard it as in all respects and features to be applicable to our case. If the European system is to be regarded as cosmical or of universal application, then of course America is to be brought under the general category, but on the other hand if the order of succession should prove anywhere doubtful and uncertain, then we should be inclined to say that so far as the question of time is concerned the problem is still unsettled. We suggest that the system be put to the test, and that we shall first ascertain the facts before we say conclusively that there has been any such succession of ages on this continent.

We come then to the testimony furnished by the relics. Do these indicate that the ages which have been recognized in Europe are to be found following one another in any such order of succession? On this point there probably will be a difference of opinion. Some will acknowledge that palaeolithic relics have been discovered in the gravel beds of New Jersey; and that these preceded the Neolithic, and that bronze relics abounded in Mexico and Central America, that these belonged to an age which succeeded the stone age; thus making these divisions of prehistoric times exactly the same in America as in Europe. This however might be answered in the following way. The rude stone relics from the gravel beds of New Jersey are not by any means as old as the polished stone relics taken from the lava beds of California, for the latter are found in a geological strata much lower down than those of the former, and hence belong to a more ancient period, but the bronze relics of Mexico are really older than many stone relics; the rude savagery which preceded the times of the highest civilization having survived it, and the stone age which



Fig. 4.

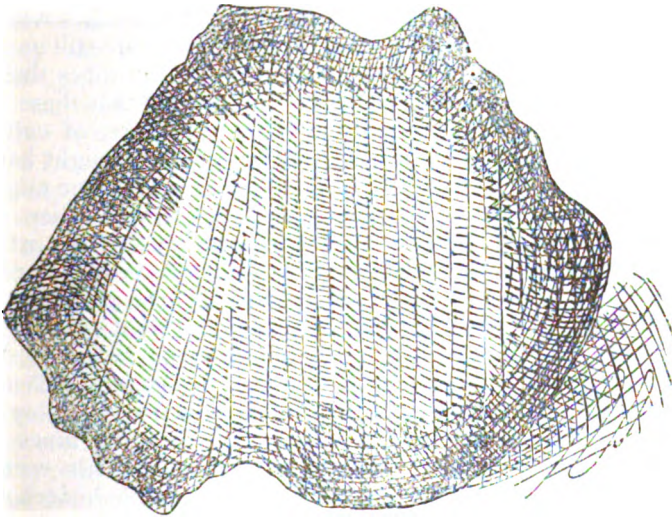


Fig. 5.—RUDE STONE RELICS FROM MOUNDS OF WISCONSIN.—J. C. DE HART.

ordinarily would precede the bronze being perpetuated latest into history.

Looking at the subject as it is presented to us by the cabinet, we should say that the classification of the relics according to material and appearance after the European plan, was the proper one. But looking at it as it is presented by the field the case is very different. Geographically considered the relics would indicate that the paleolithic, neolithic and bronze ages had all prevailed, but chronologically considered, it is difficult to determine either the order or the date of their appearance. Still, we are to remember that the field in America is a broad one, and that the relics are gathered from remote districts.

The case is similar to one which might be experienced in Europe. If we should go to some cabinet and examine the relics which are brought from Denmark and Sweden, and compare them with those brought from France, we should find some earlier and some later, and yet both belong to the stone age. On the other hand, if we should compare the bronze relics from Switzerland with those from the Roman camps in Great Britain we should find some earlier and some later and yet both belonging to the bronze age. The districts in America from which the relics are gathered are more widely separated and the races more isolated in their development and yet it does not prove as easy to show which age followed the other as upon the European continent. There are wide gaps between the archæological groups; the relics in the cabinet are easily distinguished but we are at a loss to decide which group was the earlier and which the later, for there are very few localities which have yielded relics which belong to more than one horizon, and those localities are still under discussion. We would say also in reference to the relics themselves that certain writers are taking the ground that these do not furnish conclusive evidence concerning the degree of cultus which prevailed; that the relics of gold and bronze might have been in the hands of a rude people, and that relics of stone might have been in the hands of a civilized people. Carved relics resembling those of the Feejees, very elaborate and perfect, are in the hands of fishermen on the north-west coast, but rude flint implements resembling those found in St. Achuel, France, are found in the hands of an agricultural people in Tennessee and Missouri. On this point we shall not dwell, for the subject can be cut to the quick on both sides. A recent writer in the "Popular Science Monthly" takes the ground that there is no evidence that alloyed or smelted relics prevailed in this country before the times of Columbus; that bronze relics were not discovered. This writer disputes the assertion of Prescott, Robertson, and other historians, and undertakes to impeach the testimony of the ancient authorities from which they drew, such as Sahagun, Las Casas, and others. He bases his opinion upon the assertion that few bronze

relics are found in the museums of Mexico, and he denies that bronze relics were offered for sale in the Mexican market in the time of Cortez. The descriptions of wrought gold ornaments which were discovered in Mexico, though they are very definite and specific and frequently repeated, he claims were all written for effect designed to please the King of Spain, under whose patronage the expedition was conducted. These conclusions seem to have been reached under the influence of the theory advanced by Mr. L. H. Morgan, that the so-called civilized races of Mexico were little more than savages, and that their condition was not very remote from ordinary Indians. An extreme way of putting the position which had some grains of truth in it,

That there were bronze relics in very considerable numbers in Mexico and Central America, we think must be granted. The researches of Valentini, of Le Plongeon, and Charnay, all indicate this. The association of bronze relics with gold ornaments finely wrought, of carved stone implements and utensils, woven cloths made from various kinds of fibres, of pottery finely ornamented and perfected, with paper and other material which are supposed to be peculiar to civilized people, all indicate that the bronze period had been reached in this region. If there is any doubt of it we need only to compare these relics with those which have been discovered by Castellani at Rome, Schliemann in Troy, and Mycenæ, and other archæologists of Europe. Gold ornaments so finely wrought and so exquisitely finished also prove that the bronze age in America was equally advanced with that in Europe and in Asia.

The stone relics of America taken by themselves alone might convey the idea that here there was a low stage of society, yet the gold ornaments would indicate a high state of art and a high stage of civilization. A barbaric magnificence prevailed in Mexico which must have surpassed anything known to the Swiss Lake Dwellers, and must have been equal to that of the Romans who were residents in foreign countries. Still the stone age surrounds this bronze age, making an island in the midst of the sea, or rather an elevated plateau in the midst of an ordinarily level continent. The stone age prevailed among all the uncivilized races, among the rude hunters of the north, the agricultural people of the south, and even among the village dwellers of New Mexico and Arizona, but it suddenly stops with the latter people. The bronze age commences with the civilization of Mexico but leaves a great gap, the intermediate links not having been discovered.

It is remarkable that there should be so great a difference between the regions referred to above, but to some it indicates that a wave of population from some other continent had at some time rolled over this region, bringing with it the inventions, arts, and advanced cultus of the people. Whence this cultus arose,



what direction it took, and at what date it was introduced, are unknown, but the evidence is that it was introduced.

The length of the stone age in America is worthy of notice. Geographically speaking the stone age covers nearly the whole continent. Tokens of this age are scattered from the Atlantic to the Pacific and from the Arctic Sea to the Gulf of Mexico, and traces of it have been found even in the provinces to the south-west, such as Mexico, Yucatan and Nicaragua. The bronze age may indeed have been introduced into Central America at a very early date; a date varying from four hundred to twelve hundred of the Christian era, but before that we have no doubt that the stone age prevailed in this region. The bronze age may be called proto-historic, as it comes in between the historic and pre-historic, the records on the monuments and in the codices going back to the date of its introduction, but the stone age was pre-historic.

The pre-historic age strictly speaking comes before all history, but the aboriginal history of Mexico takes the bronze age out from the prehistoric and places it in the proto-historic. Thus we are practically left with the stone age covering the continent during the entire pre-historic times. This fact however brings up the question as to dates and the significance of the word age. We have seen that the three ages, the stone, bronze and iron in Europe embrace the entire period of man, and that the sub-division of the stone age carried the period of man very far back, so that he was really cotemporaneous with the extinct animals. In this country a single age, the stone age, embraces the entire epoch, the bronze age, being so far as dates or extent of its prevalence, very subordinate, and its relics to be properly classed by themselves. We do not deny the existence of bronze relics, but the problem concerning them is, from what country were they introduced and to what period do they belong. It is certain that whether these relics were introduced or not, they did not spread and never appeared in the region now occupied by the United States. Bronze in America must be considered like iron in Europe, the token of a cultus which just touched upon the shores of the southwest districts but which stretched no farther, or, was not indigenous to the soil.

The stone Age, or more properly the neolithic age, was older on the Pacific coast than the paleolithic on the Atlantic coast. While it may be supposed to be older than the bronze age, it survived later, so that it may be said to embrace the whole epoch of man in America. It prevailed throughout the entire United States, and furnishes to us the largest number and greatest variety of relics, and offers the most material for us to study.

We turn now to another problem connected with the stone age, the last one we shall consider at present. It relates to the

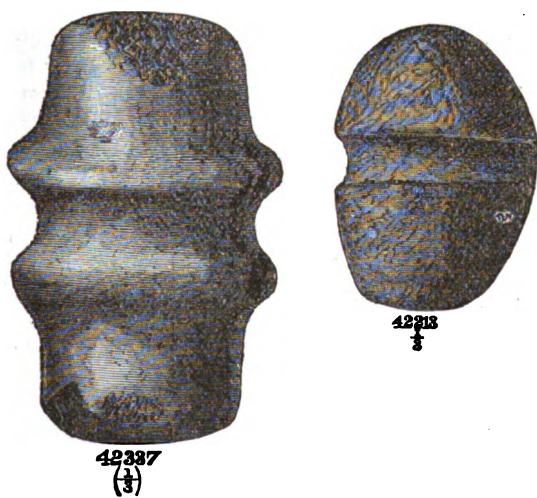
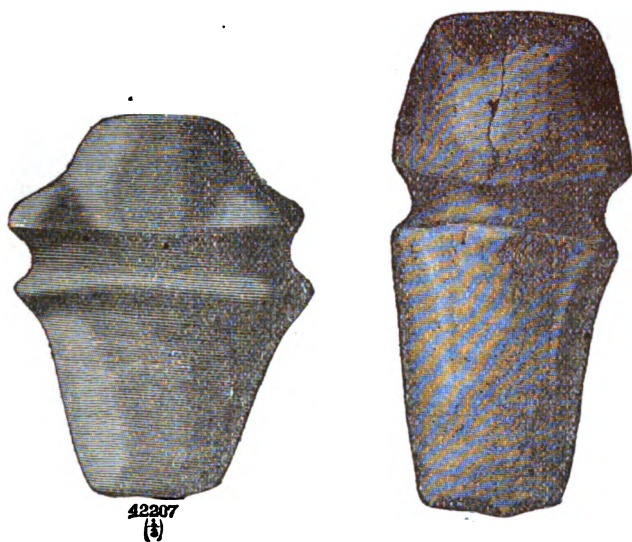


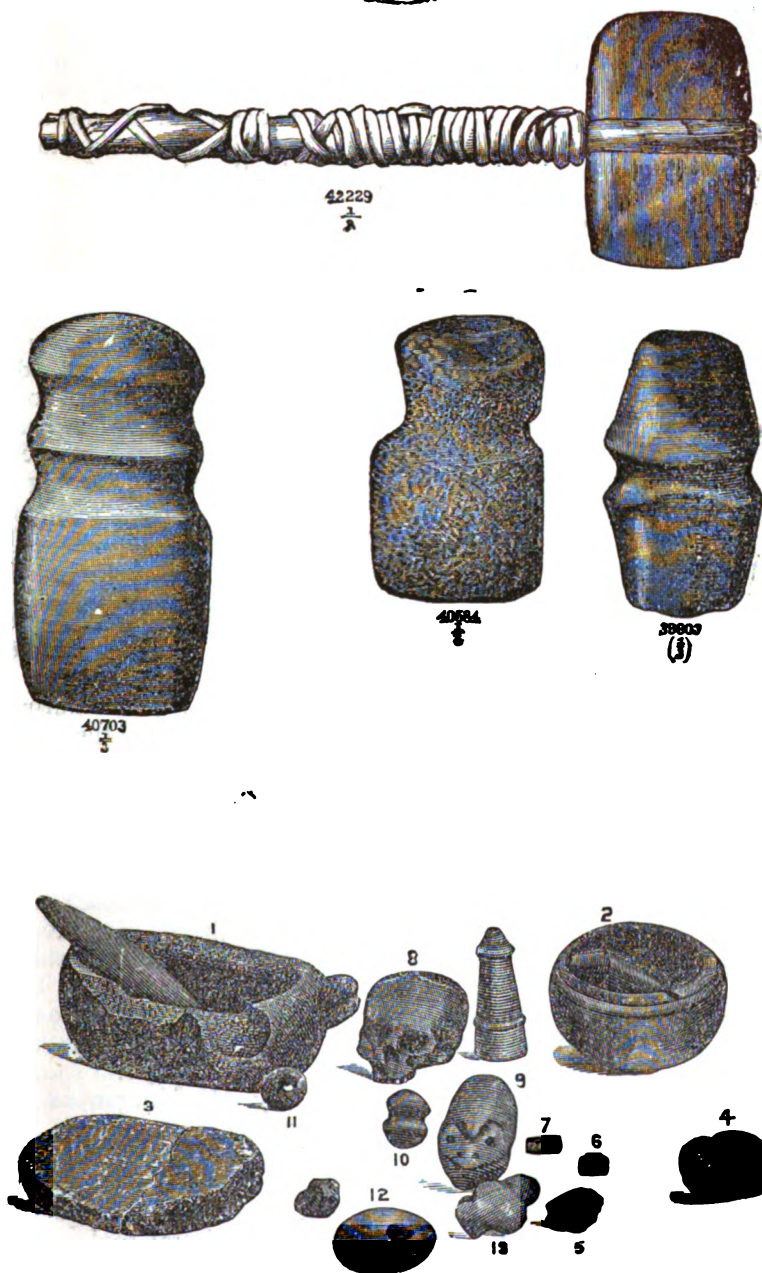
Fig. 6, 7, 8, 9, 10.—WALPI RELICS FROM NEW MEXICO. JAS. STEVENSON.

social condition of man during the stone age. How can the archæologist determine this?

It is one of the unsolved problems whether bronze relics furnish the evidence that at a definite age or period of time a cultus which differed from that of the stone age ever extended over the United States. We do not deny that an intruded cultus might produce a new age, and it might be possible that the bronze of Central America would ultimately have spread over the entire continent, but we take it as one of the results of our present state of information that the customs, notions and relics which prevailed in the southwest portion of this continent are to be compared more to the tokens found in either the African or Asiatic continent than they are to those found in the interior. They are, to be sure, found mingled and blended with the symbols and tokens of Central America, but they seem to be foreign to it. They are like the traces of the iron age as it first touched upon the shores of Great Britain, and are to be studied in the same way.

Perhaps the archæologist may gather some hints from the ethnologist which may benefit him. Ethnologists deal mainly with living races; archæologists with tokens of races which are supposed to be dead, and yet their classifications need to correspond. We may find it for our advantage to examine some of the systems of the ethnologists and to ascertain the tests according to which they would classify and divide. The ethnologists who have treated of the American races, such as S. G. Morton, J. C. Pritchard, L. H. Morgan, Lawrence Smith, and many others may be examined. Mr. Pritchard uses the physical traits as tests by which the human family should be divided. The mode of life and social status may be learned from physical characteristics. Fishermen have prognathic jaws, pyramidal heads, squat bodies, and features of a degraded type, the Eskimos being good representatives. Hunters have their representatives among the North American Indians. The form is straight and sinewy, and the head long or short according to race or locality; the hair straight, complexion copper-colored, the main characteristics being the flattened tibiae. The nomadic races, we think, are represented by the Tartar tribes in Asia, and to a certain degree by the ancient inhabitants of Peru, the characteristics being generally a dolico head and agnathic or straight lined face. According to this classification we should have three conditions of society represented by three separate districts, possibly by three distinct races, and we should find no difficulty in dividing the stone age into three different stages or conditions, the mode of life in each case being indicative of the social status.

Mr. L. H. Morgan has however given us another classification and has subdivided the ages much more definitely. He divides society into three stages: Savagery, Barbarism, and Civilization, and finds representatives of these three conditions on the Ameri-



Figs. 11, 12, 13, 14 and 15.—RELICS FROM NEW MEXICO AND OREGON.

can continent. The tests which he applies are somewhat similar to Pritchard. He makes the means of subsistence the index to civilization, or rather the index to social status. He however does not look for the effects of subsistence and mode of life so much in the physical traits of the individual as in the social status of the people and regards the relics of art and architecture as furnishing indices of these as well as the skulls and skeletons. Ethnographic conditions are influenced by the physical features of the country. These he considers frames which indicate the kind of pictures they contain. He brings in several elements which must be learned from the living races. Taking five points, namely: the means of subsistence, geographical surroundings, the condition of art and architecture, the tribal organism and religious symbols, Mr. Morgan leads the way from historic to pre-historic races and gives us tests by which we may divide and sub-divide them. We may say that the labyrinth which was so dark before has now several clues upon which we may take hold and explore its mysteries. The keys to the separate chambers are furnished to us from his hand. Mr. Morgan divided each one of the stages of society into three sub-divisions, making a lower, middle, and an upper grade of savagery, barbarism, etc., and maintains that these different grades are made known by the relics. He makes the hunter life to be the middle stage of savagery, the agricultural life the lower stage of barbarism, and village life to be the highest grade. He would place savagery on one extreme and civilization on the other.

In that case we should say that in the United States during pre-historic times, the condition of barbarism included the three grades represented by the hunters, agriculturalists, and villagers. The stone age, however, would embrace much more than this. It would include savagery as well as barbarism, for the relics of the fisherman are as thoroughly stone age as are those of the village residents of the interior, and the agriculturists, and hunters may be regarded as having the fullest use of these relics. There are, to be sure, bone implements in the hands of the Eskimos, and cloth garments in the hands of the Pueblos, yet stone relics were the most common implements for both classes. The question is, can we take the relics and classify them so that we can say that one belongs to the fisherman, another to the hunter, another to the agriculturalist, and another to the villager.

The cultivation of maize is regarded by Mr. Morgan as indicating a social status quite different from that of the hunter, but does the cultivation of maize exclude the hunter-life. It is a singular fact that the relics used by hunters are found on the territory occupied by the Iroquois, but those used in woodcraft such as stone axes, are very rare, and agricultural tools, such as hoes and spades are very difficult to find. It must be acknowledged that agricultural implements do abound in great

numbers in Missouri and Tennessee, though it is not known that the people who dwelt there were any more advanced in their agriculture than those who dwelt in the Gulf States where agricultural implements are scarce. Here then we have a problem before us. How can we classify the relics so as to determine the condition in which the people were, who used them?

The stone age extended from the Arctic sea to the Gulf of Mexico, and from the Atlantic to the Pacific, and covered the whole territory with its tokens. It included the savagery of the north, the barbarism of the south and the semi-civilized races of the west under its rule. To it belong the shell heaps by the sea, the mounds and caves of the interior, the Pueblos and cliff dwellings of the far west, and nearly all the pre-historic remains of the continent. It seems to have been prevalent at the earliest date and survived to a very late period. Yet the stone age in America still lacks subdivision, and is known only in a shadowy and uncertain way. The question is whether we may not reach points in reference to its subdivision and its limits which shall make it more definite and complete, and whether it may not prove a factor in our hands which shall help solve the great problem of man's history and development.

S. D. P. ~~111~~ <sup>112</sup>

---

## Correspondence.

---

In order to facilitate the labors of specialists in the various departments of archæology, THE ANTIQUARIAN will publish, from time to time, notices of public and private collections of stone and bronze implements which may be scattered throughout the United States, thus bringing together the material for an exhaustive review of the aboriginal productions of this and other countries. It is desired that all interested in the subject will contribute whatever facts they may be able to obtain in this relation.

---

### GRAVES AT FORT ANCIENT.

*Editor Am. Antiquarian:*

Without doubt the largest and most interesting earth work in Ohio is Fort Ancient. Situated on the high hills facing the Miami River, guarded by almost inaccessible ledges and precipitous ravines, it has withstood the wear and tear of the elements for ages, and defied the destroying hand of man.

The fort itself has been often surveyed and the measurements well known to every antiquarian. But there has been one thing overlooked by the numerous surveyors and that is: No mention has been made of the peculiarities of this fact, of the relics found there, of the graves that exist in countless numbers, or of the stone "altars" and "pavements." The grandest of all our earth works has never had the justice nor the study given it that it

deserves. Students have left the most important of all ancient works and gone to other points where there existed fewer relics, but perhaps less labor was requisite to unearth them. On account of the laziness of a few prominent individuals we have always remained "in the dark" with regard to information concerning Fort Ancient.

The writer always believed that there was much to be discovered at the fort. He always thought proof could easily be obtained that would establish his favorite theory, i. e., the fort was not erected for ceremonial or national purposes, but simply for defense. Accordingly, upon the fourth day of July, accompanied by a strong college chum and well provided with everything needed in making explorations, he left for Fort Ancient.

Upon reaching the little hotel at the foot of the hill we found quite a number of gentlemen there come from a distance to view the fort and spend a quiet Fourth in the country. These gentlemen remained but two days and in that time they walked about the fort buying a few arrow heads and axes of a resident farmer to take home as trophies.

As soon as we had eaten dinner we went up the long steep hill and met a farmer (quite a friend of mine) who had lived within a stone's throw of the fort all his life, and who was so well posted that what he did not know was hardly worth knowing. We found out from him just where the graves lay, and taking his brother as assistant set out early Tuesday morning for the spot. Our path lay directly through the length of the "New Fort. I could not help but notice how easy was the walking, as there was no underbrush, a strong wind or hurricane followed by a forest fire having completely cleared the central portion of the fort. A year ago one could not make his way through the underbrush without the use of an axe.

Upon reaching the "Gateway," (the point where the Old Fort and the New Fort walls come within twenty-five feet of each other) it was proposed that a hole be dug near there to see what kind of earth there was at this point and to ascertain if there were any graves. Our guide said, "You'll find lots 'o bones here; there's been thousands of 'em buried. But you won't find no relics. I have heard tell of flints being found in the walls herabouts in large numbers. Sometimes there is forty or fifty darts both big an' little piled together, as if they had been hid at some time or 'nother. I've found lots of darts among the houses here. Shouldn't wonder if they was the very arrow points what killed 'em."

And the rest of us thought so too. We sank a shaft six by ten and five feet deep. We found many human bones. The bones were much decayed and from their position we judged no regularity of burial had been observed, but that the bodies had been thrown carelessly into a shallow hole. Skull bones, leg,

arm and breast bones were all mixed up in one heap. We took out upwards of fifty femurs and tibiae, many hundreds of finger bones, ribs and teeth. But not one *whole* skull or skeleton could we get. There was no limit to the number of bones. I might safely add we could have dug up *bushels of them!* Surely the vast number of bones occurring at this point is a proof of some great calamity which fell upon the natives so suddenly they had not time to properly bury their dead. And as these dead are found so near the gateway is it not conclusive that they fell in battle while trying to defend this point from attack? If not, why are the bodies found here, and why are they not buried in the regular way? In the other graves down on the slopes of the hills are stones, and in some cases the site of graves is marked by a heap of stones. But these bodies have nothing to mark their resting place. The antiquarian here has nothing by which to go, and the striking of these deposits of bones is mere luck. Further on we dug many little holes finding but few bones and those very much decayed.

Those who have visited the fort within late years know there is a large cleared spot in the west end of the Old Fort. This open spot embraces some fifteen acres, half of which was planted in corn and the rest meadow. The hay on the meadow portion had been cut. It was decided to explore the ground at the edge of the cornfield. The surface was covered with fragments of pottery, bones, arrowheads and mussel shells. Upon the surface in half an hour's search we found nearly a hundred pottery fragments, many broken bones, a pestle, arrow heads and a few shell beads. But when we dug it was found that the plowshare had so disturbed the remains and all relics interred with them that further search was useless. Nothing of value was found here save a small gorget of black slate. Our guide then took us to the precipice. This is the steepest point on the entire line of hills. The river flows nearly three hundred feet below, yet so near the base of the bluff that a stone can be thrown from the top of the embankment into it without difficulty. Warriors stationed at this point would have a splendid command of the river and could very easily keep canoes from ascending or descending. About half way down this bluff and covered with dense underbrush there is a narrow strip of level ground. It is not over fifty or sixty feet wide yet extends around the hill for nearly a quarter of a mile. The formation is natural. This is covered with river stones lying in some places four feet deep. Removing these stones from a place ten by twenty feet we dug a broad and shallow hole, carefully examining the earth that we removed. We found lying slightly bent and upon their sides, three skeletons, each having attained an advanced state of decomposition. From the worn teeth of one we judged he was an old man. (Our guide did not agree with us; he said "He's been eatin' tough



meat, that's all the matter with him.") The others were of average size and had remarkably well preserved teeth. Close by the neck vertebræ of the "old man" lay nineteen beads of polished shell, all quite large and very finely finished. There were two large spear-heads of yellow flint and a celt of greenstone by his side. Seven copper beads, quite rough, a small grooved axe of sandstone and a slate ornament or pendant with two perforations in it lay directly beneath the head of one of the skeletons. The other fellow must have been poor in this world's goods, or else his relatives had nothing to give him, for all he possessed was a paint stone with circular depressions on each side, a small bit of hematite for paint and three small spear-heads. We could not tell whether these were the only bodies buried at this spot or not. These were certainly all that were buried with relics and buried with regularity, but there were bones, small broken ones, scattered a few inches below the surface. Perhaps these were bones of those who fell in battle and were never covered at all save by a few stones.

It was now dark and we returned to the hotel well satisfied with our work. Wednesday was one of the hottest days I ever saw. It was 107° right where we were working, and we had to give up before we had all the stones thrown out from one spot, for we feared sun-stroke should we finish. In the afternoon I visited my friend the farmer and bought some objects of interest, some of which he had plowed up on the meadow mentioned, and others he had found in graves. Some of the objects were of slate banner stones, drilled tubes, pick shaped implements, etc. All were of very great interest. One object in particular was a fine sample of aboriginal work. It was a tablet of gray slate 4x6 inches, with eight perforations in the form of a square in the centre. This farmer told me that in early days, before most of the relics had been plowed up, it was no uncommon thing for him to find several hundred arrow heads inside of a week. He had sold thousands to tourists every summer, and his neighbors living about there had sold nearly as many as he had. There must have been upwards of a hundred thousand implements found and sold within the last fifty years there at the fort. I know of six large collections aggregating forty thousand specimens, almost all of which were either begged or bought of farmers living near the fort. I do not mean exaggerate when I say that there is no spot in the State of Ohio where there are as many relics or their value so great as at this place.

Thursday my college friend and myself went alone to pursue our excavations. Our guide had spent his earning almost as soon as he received them and was laid up on a *bender*. He was as good as gone for two days! This day we carried on work in the valley at a "grave yard" near the river bank and unearthed two skeletons and numerous bones, but no relics of value. When the

river was high last spring it washed out of its banks nearly twenty skeletons and seven pieces of pottery, (whole.) Some doctor from the east bought this pottery. I have looked in vain for any account of it and could not learn his name. We were in hopes of procuring some pottery but all our efforts were in vain, and we had to abandon excavations there that evening. As the river had washed out the cornfield quite badly the owner of the lot requested us not to dig there any more.

Friday we returned to the hill and renewed work, although the heat was so intense that out-door labor was dangerous. Having thrown out the balance of the stones and dug down about a foot we reached a mass of bones of some dozen persons. Among these bones and mixed in the dirt were some hundreds of small snail shells perforated. We found a few polished bone beads, a couple of fine bone awls and one prong of a deer's antler. In the way of stone implements we found fourteen arrow and spear heads, one or two large rough flint chunks which may have been used as heads to war-clubs, two axes, four celts, three small slate ornaments. There were also fragments of a large yellow earthen jar and bits of hematite ore.

It was now high noon and we returned to dinner. While there a message came from home summoning me to attend to business duties and I had to suddenly break off the interesting work. Before leaving I saw my friend the farmer and obtained some valuable information. As near as I can remember this is the conversation which took place:

"I once saw a collector have a rude sun-dried brick which he claimed came from a pavement at Fort Ancient. Do you know anything about it?"

"O yes. That pavement is three or four feet wide and nearly four hundred yards long. It is six feet beneath the ground and begins at the two small mounds just outside the south wall of the fort. The pavement runs directly south. We will dig down to it and study its construction when you come down. There is another object of interest near here, a mastodon's head cut on the surface of a huge granite boulder. North-east from here lies Freeport, and there it is where there is the largest Indian burying ground I know of. At one spot there in the centre of the grave-yard there is an altar of stones. The top of the altar is even with the top of the ground, the base six feet below the surface. The stones that comprise this altar are piled up regularly and cemented with red clay."

I have never seen it stated that there was an ancient pavement of river stones and sun-dried bricks in any of the surveys or reports concerning the fort, and do not believe any one knows of the mastodon's head save this farmer. Both these items will be of great interest to archæologists if they can be proven, and there is no reason why we should doubt the word of this man.

There is one comical feature connected with Fort Ancient. There is a most peculiar old individual living within her walls. He is possessed with the idea that a bag of gold is buried thereabouts and has a colored man digging here and there nearly all the time. This old man is the victim of many jokes, some of which are cruel. But he keeps right on, never giving up the search. I saw several of the excavations his man had made. Some of them were twenty feet deep.

Trusting that some day Fort Ancient may come forth from the clouds which surround her and reveal a history that no other spot of ground in this state can equal.

July 30, 1887.

WARREN K. MOOREHEAD.

---

### MOUNDS IN MANITOBA.

*Editor Am. Antiquarian:*

During the past summer I investigated the question of mound remains in Manitoba, Canada, on the line of the Red river and discovered a number of mounds and embankments, some of which I opened. I have traced a continuous line of mounds from the Minnesota river down the Red river to Lake Winnipeg. I opened some of them and made some very interesting finds, including sea-shell ornaments, stone tubes, pottery, beads (shell), flint implements, etc. I am now receiving letters from correspondents in the Canadian northwest which inform me of the whereabouts of numbers of mounds on lakes and streams. This is the first extensive discovery of prehistoric remains in that district and it extends the mound system to limits not before recognized or known. I am now mapping out the position of the remains and writing a paper on the subject, having visited Washington for the purpose of examining the collections there.

Toronto, Feb. 4, 1886.

CHAS. N. BELL.

---

### CARVER'S CAVE.

*Editor Am. Antiquarian:*

Yours of May 10 at hand. It has been some years since I saw the inside of Carver's cave and I do not know whether there are any pictures left there or not. I first saw it some twenty years ago, and there was one picture which was quite distinct. It represented a snake. It was probably thirty inches long, and three or four wide. I doubted then and do still, that it was a bona fide aboriginal hieroglyphic, but some persons claim that it was there when the whites first came here. I think it was made by some joking white man.

Saint Paul.

J. F. WILLIAMS.

## REVOLUTIONARY RELICS IN NEW YORK.

The following is a list of relics and coins in my cabinet:

Revolutionary relics, 1776, and 1777: Sword used by Freeman the American scout in the action of Oct. 7th., 1777; sword used by Captain Knight in the war of 1777 and 1812; point of sword plowed up on the battle field Freeman's farm or Stillwater, at New York; English side knife; lock complete, taken off of the door of the room where Gen. Frazier died, at bank of Hudson river; silver butter knife that belonged to Madam Reidoell, found in the house where Gen. Frazier died; cartridge box of 1776; English bayonets; Hessian bayonet; American bayonet; 1 24 lb. bomb shell found in the river at Stillwater, N. Y., near where the English boat capsized; also a 24 lb. cannon ball found at same place; 1 6-lb. cannon ball plowed up near the great redoubts on Freeman's farm where Arnold stormed them; 2 4 lb. cannon ball plowed up on the Freeman farm; two 3 lb. cannon ball ploughed up on above farm, and one 2 lb. ball; about twenty-five grape shot found on above farm and about one-hundred musket balls; knee and shoe buckles found on above battle field; also spur, gun flints, and pieces of gun locks; horse-pistol barrel; bit for horse belonging to some officer; a Burgoyne hatchet; gold-plated button that came off of Bvt. Brig. Gen. Peter Gansevoort's coat, 3d. Reg. N. Y. Continental Inf.; one pewter button with U. S. A., also a lot of other buttons and copper coins found on the battle field; two paper holders of 1776; one cane cut off of the sprout from the tree where Gen. Frazier was shot and fell from his horse; pieces of the Great Redoubt; one piece with grape shot in; piece of breast work that was thrown up by Gen. Redisell. All of the above are Revolutionary relics. Indian peace pipe that belonged to Chief Red Cloud of Minnesota, in 1862, complete; two arrows that belonged to chief Spotted Tail of Dakota Ter.; Indian hammers, stone; Indian pestle, stone; Indian flesher, stone; Indian spear heads, about twelve; Indian arrows thirty or forty; three Indian axes, stone; one piece Indian pottery; some bells off of Indian medicine bag, etc. I have also a collection of coins from all parts of the world; also a list of copper cents almost complete; a beautiful collection of crystal quartz; mineral ores, and geological specimens and petrifications.

DR. E. R. FREEMAN.

---

## CABINET OF RELICS IN NORTHWEST OHIO.

I will give you the number of relics which I have in my collection and a short description of some of the rarer specimens:

Forty-seven grooved axes. Some of these were probably used on ceremonial occasions as they show no marks of wear, are large and beautifully grooved and polished. I have three or four spec-

imens that are far more perfect as works of art than any I have ever seen in public collections. Some of these axes have seen hard usage. A few are pecked without any polish; some are partly polished. They weigh from one-half to eight lbs.; are from two and one-half inches to nine inches in length; materials: granite, conglomerate porphyry, quartz, etc. Twenty-five hatchets. These are celt form, taper from each side equally to form the butt; also oval in form; from two and one-half to eight inches in length. Some of them weigh four pounds. Twenty-six grooved hammers of all sizes, shapes, and material, double headed, rude, pecked, polished, and some very poorly balanced. Eighteen hand hammers in all stages of wear. I do not include polished balls with these. Ten polished balls, round and well polished, from six ounces to two pounds in weight; some very handsome pebbles partly and wholly marked, and all shapes, from oval, one inch long, to five inches long and one and one-half inches thick. Thirty discoidal from one-half to ten pounds in weight. Some of these are rude, but have a depression on each side, the surfaces but little marked. I find these only in certain localities. From the appearance of these rude ones I should judge they were among the oldest relics we find. Chisels gouges, etc., sixty-five. Chisels long and narrow, some round, some nearly square. Bits in round and square in center, from which they gradually merge into the gouge forms. Many of these are very perfect and of beautiful shape and finish. Many show a large amount of wear and most of the gouges have been used by right-handed persons. I have some miniature wedges and gouges. One gouge two inches long, flat on one side, curved bit, is made of porphyry block ground, and white crystals beautifully polished. Another of black slate is the same size only a little wider. Nine hoes or adzes. Three of these are not finished, merely blocked out, from four to nine inches long and from two and one-half to five inches wide, grooved around the edges and over side, flat on one side convex on the other. Some are striated. Four modern tomahawks: one with rounded pole; one pipe pole three inches long, one with pipe on pole. These three are of iron and steel. One of brass with a steel edge dovetailed on, a large pipe in place of pole, the whole finely carved. Six pottery by exchange from Whiteside County, Ill. Seven pipes: slate 3, wood, 1, sandstone 1, Michigan catlinite, 2. The sandstone pipe has the bowl and stem hole both on the surface and the bore of each is inclined to meet the other. Catlinite both of rare forms. Curved lines on both sandstone and Catlinites of angular pattern. One of the slate pipes is the shape of a corn cob pipe. One has a stem one and one-half inches long and looks like a clay pipe in shape with one and one-half inches of stem attached. The wooden one is carved to represent an owl.

WM. TAYLOR.

Findlay, Hancock Co., Ohio.

## SHELL HEAP AT CEDAR RAPIDS, IOWA.

*Editor Am. Antiquarian:*

Shell heaps are by no means uncommon in Iowa, but one unusually well exposed occurs on the "west side," Cedar Rapids. It is located at the corner of A Street and 7th Avenue. Both street and avenue cut through the heap, giving a fine section. The heap is situated on a knoll near the Cedar river. About half of it is a cultivated field between A street and the river. In this field the heap is sixty paces long. The section shows the layer of shells to be about one foot thick. It is overlaid by a few inches of dark sandy soil and underlaid by sand. The shells are all Unios of various species. Though sadly decayed the following can be identified: (Nevrus.) U. metanevrus, U. alatus, (Rugosus) U. negosus. One or two fragments of bone were found. Flint chips are not uncommon, principally red or brown jasper. A few very small fragments of pottery were found. On the surface were found two flint implements. One evidently begun for an arrow. The point is gone but has been chipped with some care to a blunt rounded edge

W. B. EVANS.

## SKELETONS AND RELICS FOUND IN IOWA.

*Editor Am. Antiquarian:*

Up the Niobrara river twelve miles, on the north side is the ancient site of an Indian village. It is level. On the south side the land descends abruptly some thirty feet to the bottom lands of the river. On the north is a hill several hundred feet high—a prolongation of the high prairie land back from the river. Two ravines, starting on the prairie lands, follow the base of the hill until they approach within a few rods of each other, when the right hand one bears to the right, and the other to the left, until they reach the bottom lands, thus forming the other two sides of an acute angled triangle containing about seventeen acres—a well protected and most delightful location for a village. At the southwest angle of this tract, half way down the east bank to the west ravine, in digging a cellar the owner of the land exhumed several human skeletons. The massive jaw bones, and retreating foreheads, and heavy superciliary ridges projecting laterally and in front, and the broad nasal bones, show unmistakably that the inhabitants of the village were Mound Builders. These bones were taken from below the surface four or five feet. Since they were deposited the river had encroached upon the land and washed away part of the vault, and receded a half mile or more depositing bottom land, and on the bottom land, nearly a half mile from the vault the owner of the land gathered together a part of the remains of a petrified mastodon too heavy to float there or to be carried around by peo-

ple for amusement, found in a water course, in a cañon north of the Niobrara river, in longitude 100 degrees or about that, by some freighters in 1878.

I have a small ball which contains characters and lines on its surface. It is a ball of irregular shape with many elevations and depressions upon its surface. It has four holes on its surface. Above one hole on the right hand side is a groove that has been cut there. The ball appears to have been arranged, in its characters and lines, into two hemispheres, the line between the hemispheres passing a little to the right of the groove, and at right angles to it. One hemisphere is elevated in the center, over which elevation passes a line of slight depression, from the hole by which is the groove, parallel with the groove, dividing the hemispheres into two parts. The characters appear to be arranged with reference to the groove, and the green lines may have passed across it at right angles or nearly so. The hemisphere on the other side is depressed or flattened across the center at right angles with the elevation on the other hemisphere, and the characters and the green lines are at right angles with these on it. The whole surface of the ball has, probably been covered with characters. The lines in green paint were afterwards drawn. There appear to be three kinds of characters. Some are mere scratches, some are pricked in and some are engraved. All are difficult to trace as the ball is considerably worn.

J. R. NISSLEY.

---

### “FURNACES” AND “WELLS” IN ROSS COUNTY, OHIO.

*Editor Am. Antiquarian:*

There are many fine collections in this County, there are also numbers of mounds herabouts—some twenty or thirty in this County alone—also many forts or fortifications both of stone and earth. Some that I would deem especially valuable. There is one place in particular about which tradition still lingers and which is of interest. It is an old stone wall or fort on top of a high hill whose base is washed by a creek historic in the early times of this state. About half way up this hill are the remains of furnaces or something similar, and around them are cinders by the wagon load, and there is where the tradition comes. The furnaces are mere depressions in the ground called by the people “pot holes.” In the bed of the creek at the foot of the hill are what are known as “the wells,” large circular formations. Whether natural or artificial I cannot say, but they seem to be filled with rock and excavated out of the rock. Between the rock filling and the outside is what looks like cement of a dark grey color,  $\frac{1}{2}$  inch or more thick, and very hard. These “wells” are in the present bed of the creek and are some sixteen in number, and several feet in diameter. The creek makes a bend to get to them and to get away and there are

indications that it at one time ran some distance farther west and nearer in a straight line to its direction above and below the point spoken of. On the west side of the stream and perhaps a mile away is a dirt fortification inclosing some acres of land and is in most places several feet in height at the present day. Bear in mind that the dirt fort is almost due west from the stone one on the hill about a mile. There is no mineral known in this locality except what tradition tells of, and whence these cinders and slag? There are several (4 or 5) large mounds a few miles south of this near the same stream.

W. J. PARKER.

Roxabell, O., Dec. 7, 1885.



## THE NATIONALITY OF LOGAN AND HIS FATHER.

*Editor Am. Antiquarian:*

I am personally much obliged for the full proof of Shikeleng's nationality, as given by Mr. A. L. Guss in one of your late numbers. It seems quite conclusive. I quoted from Morgan's "League of the Iroquois," a work of which I have grown sadly distrustful, supposing him to be right on that point at least, as it harmonized with the general opinion here. My point was that he must have been an Iroquois *sachem*, as being intrusted with so high a post. Then came the puzzling statement in Zeisberger's life, of the adoption of the Moravians, which Mr. Guss has placed in a clear light.

The idea that Logan was a Cayuga chief is so firmly fixed in the popular mind that a monument was erected to him in Cayuga County, N. Y., on the site of an ancient earthwork some years since. As to how this belief arose opinions might differ. According to some of the Pennsylvania records quoted, the mistake might have commenced there, where the lives of father and son were mainly spent. In the *Life and Times of David Zeisberger*, Shikelling is called, in a note, an Oneida sachem in the account of Zinzendorf's treaty with the Indians. When I mentioned the quiet forest adoption of the Moravians, I passed this over because of a note by the author,\* to this effect: "Shikelling is called an Oneida in the *Buedingische Sammlung*, but according to the unanimous testimony of all the sources other than those of Moravian origin, he was a Cayuga. His Mohawk name was Swatana." Two such statements, falling in with the popular belief, created no distrust in my mind.

It must be remembered that in New York history the name of Shikellimy is scarcely known, while in Pennsylvania it was prominent. In the New York documents I remember it but once, and there it is said that "John Schecelany, a Delaware Indian, burned some houses that were built on Penn's creek." That a Cayuga or Onondaga sachem should have been placed there would

\* Page 109, *Life and Times of David Zeisberger*, Philadelphia, 1870.



have been in the nature of things, since of the Susquehanna lands, three Cayuga sachems declared over their signatures, in 1683, "The aforesaid land belongs to us, Cayugas and Onondagas, alone; the other three nations, viz. the Sinnekes, Oneydes, and Maquaas have nothing to do with it." \* How an Oneida sachem should be in power there so soon does not clearly appear. A Cayuga deputy would have been more in place.

The name of Shikellimy of course is Delaware, and the *I* in it has nothing to do with identifying him as an Oneida. In all the cases given, where there is an *alias*, the Iroquois name precedes the Delaware, by which he was commonly known to that people and the whites. He may have been in New York often, but if so he was there known by his Iroquois name. As to which nation he belonged to there, Mr. G.'s citations seem conclusive, without raising this question.

W. M. BEAUCHAMP.

---

### STEPHEN BRULE.

*Editor Am. Antiquarian:*

Your note of inquiry came duly to hand, but being much of the time away on duties connected with the ministry I could not answer it at once.

The Chippewa name of Brule river is Wisadoké sibi, which means the same as the French word "Brule" and signifies burnt, so the translation would be "burnt river." Probably there is or was much burnt timber along the shores of said river which gave rise to its name. I do not think that it was called after Stephen Brule. The ancient name was Nemitsakouat, and the French name Bois Brule, or Burnt Wood river.

Stephen Brule was a French trader and explorer under Champlain, founder of Quebec. You will find something of his career in volume I of Parkman's Historical Work. Reference is made to him in the "Relations of 1663," p. 34, where it is said "The Indians of the island, and the Algonquins who are the two nations one meets with going from the Hurons to Rebes (Quebec) wanted to persuade them from going to the French, saying that the people would play them a bad game on account of the death of one called Brule whom they (Hurons) had killed." Louis Amantacha, an Indian answered: "As to Bruslé who had been massacred, he was not looked upon as a Frenchman, as he had left his nation to place himself at the service of the English."

The *Relation* of 1635, p. 28 says of Bruslé "I likewise saw the place where poor Etienne (Stephen) Bruslé was barbarously and treacherously assassinated, which made me think some day they might treat us in the same manner." So writes John de Brebeuf to his superiors. He was really most barbarously killed with

\* N. Y. Doc. Hist., Vol. 1, p. 396.

Father Lalement in 1649, by the Iroquois, at the taking of the Huron village, St. Louis, March 16.

The *Relation* of 1636, p. 91, says, "They made us indeed a great speech as to friends, the object of which was to get us to leave the country of the Hurons altogether, or at least the Bear tribe, as being the most wicked of all, which tribe had massacred Etienne Bruslé and the good Recollect Father Nicholas and his companion at Sault An Recollect near Montreal; name given to said rapids from this fact, because it was there the father and his companion were thrown into the water and drowned.

*Relation* of 1636, pp. 137, 138, composed by the above named Jean (John) de Brebeuf, speaking of a dispute about transferring the bones of Etienne Bruslé says: (p. 138,) "Truly there is here something for which to admire the secret judgement of God for *this infamous man* (cet infame) did not deserve this honor, (to be buried on consecrated ground) and to tell the truth we found it very painful to resolve to make on his account a particular cemetery and to transport and bury in holy ground a body which had led such a *scandalous* life in the country and given to the Indians such a bad impression of the morals of the French."

*Relation* of 1637, p. 167 says that a certain Algonquin declared that he "had seen something like a French woman who impested the whole country with her breath. Our Indians imagined that it was the sister of Etienne Bruslé who was revenging herself for the death of her brother."

J. CHRYSOSTEM VERWYST, O. L. H.

## MOUND IN FLORIDA.

*Editor Am. Antiquarian:*

In February 1886, I was an attachee of a commission appointed by the governor of Florida to examine certain lands lying in proximity to the "Everglades." At the urgent request of Dr. E. M. Hale of Chicago, I take pleasure in presenting to the readers of the *ANTIQUARIAN* a general description of some mounds I visited during my trip.

Passing down the Kissimmee river at the former site of Fort Basinger I visited a mound about one-quarter of a mile from the river, situated in flat pine land made of pure sand and from which nothing has ever been taken. Continuing on our way we reached that inland sea, Lake Okeechokee through which we passed to the head waters of the Caloosahatchie, where near Lake Flint is one of the most interesting mounds in the state. Leaving our boat about ten o'clock we walked some two or three miles, and after two hours walking, or rather trying to walk, we came to the mounds shown in the accompanying diagram. The most striking object is the large mound with its adjunct, which is an oblong mound about sixty feet long by forty feet wide at the base and twenty-five feet high, and about fifteen feet by twenty feet at the top.

Connected to this by a cause-way of sand is a mound about one-sixth the size of the one described. Both of these are situated nearly in the center of a redoubt about three feet high and eight to ten feet wide, which runs clear around the two until it is intercepted by a canal or sort of a grand entrance about forty feet wide which slopes from embankments to the middle, where it is about eighteen feet below the level of the surrounding country. This "grand entrance" is about fifteen yards long, where the embankments diverge and the deep depression ceases. The embankment ran on the one side to the northwest about two-hundred yards and on the other about one hundred yards to the southwest, where it reached the conjunction of two canals, one three miles long running to the Caloosahatchie river, and the other to Lake Flint, it being one and one-fourth miles long.

C. M. FARBER.

---

### BUFFALO TRACKS IN SOLID ROCK.

*Editor Am. Antiquarian:*

On a recent trip to Mitchell Co., Texas, I observed well worn buffalo trails in solid hard sandstone. At one place on Lone Wolf Creek, four miles north-east of Colorado, the dry bed of the creek exposes a broad surface of solid rock. Across this I observed two well worn paths. Total depth worn in rock 10 inches with 4 to 6 inches, between tracks, in a path a little over a foot wide. The path indicated that the animals passed down to water, but did not return that way, for there were a few inches of rock perpendicular in front of the track, then a slope downwards into the track in front. At Seven Wells, 7 miles south of Colorado, a path was also seen; its course leading to water, and also having same slope in path. The steps were 2 ft. from center to center longitudinally, 8 inches deep, hole 14 inches long and 7 inches wide. Steps further apart as the hill descended.

Yours truly,

G. C. BRODHEAD.

Pleasant Hills, Mo., June 30, 1887.

---

### RELICS IN PENNSYLVANIA.

*Editor Am. Antiquarian:*


Your circular in reference to the AMERICAN ANTIQUARIAN to hand. I would be pleased to give you a record of the Indian Relics in my possession. I am collecting at present merely to prevent the works of our pre-historic man from being shipped to Europe; there are regular persons or agents in this section of the country who buy all the relics up and ship them to Europe, and that is a thing we all should prevent as far as possible. We have within a radius of 25 miles from here several

very interesting localities where the Delaware, Lenape, and their numerous allies held their yearly pow-wows; many of our streams bear to this day Indian names derived therefrom. My collection abounds in rare forms of axes, discoidal or quoit stones, celts, corn-beaters, arrow and spear points, etc. I will be pleased to send you a description and drawing of some of them.

Wishing you success, and trusting the AMERICAN ANTIQUARIAN may live long and prosper, I remain sincerely yours,  
Reading, Pa., Oct. 17th, 1885. THEO. A. KENDALL.

INSIDE VIEW OF A HUIDAH DWELLING.

*Editor Am. Antiquarian:*

I send you an interior view of an ancient house on Queen Charlotte's Island, for the ANTIQUARIAN. Use it as you think proper; doubtless it would interest some of your readers from the novelty of its style. Such houses, from their depth in the ground, are roomy and warm. In some villages, every house has a well of clear cold water in a corner of its floor. With regard to the copper money, I am sorry you did not give the T instead of the T. In speaking of their value in blankets, a mistake occurs; instead of "three cornered," it ought to read "three points." These points  are marks on the corners of each blanket to show their quality.

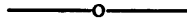
The house from which the view was taken is strictly ancient; the entrance is through the oval hole in the carved column to the house. The depth of the floor below the outside surface ranges from 4 to 12 feet. The excavations for these houses range from 25 to 50 ft. in width, and from 30 or 40 to 80 ft., or even more, in length. The two benches shown on every side of the house are for the inmates to sleep on when there are no bed-rooms; the lower one is wide enough for a person to sit comfortably in a chair. The upper bench in this house is ten feet wide and about six feet in perpendicular height above the floor; it has a rope along the brink of it to prevent any one from falling off. A floor is laid from this bench back to a cribbing of squared logs, which prevents the earth from falling in, and against which the boards comprising the walls of the house are fixed if nailed, which seldom happens in houses in their towns; never in the old houses; all are set in a grove, running the whole length of the plank. The planks used for these benches are all of one piece: their size is guided by the dimensions of the house being built. I have seen planking used for this purpose, 80 feet in length, 6 feet in width, and 12 inches in thickness; all hewn out of a cedar tree by little hand adzes. They used also wooden wedges and stone hammers. These little adzes were made of copper until lately, when they got steel, eruh yettia (iron metal) from the yett suhtay (iron men, white people,) who visited them at the beginning of this century. The

floors in the houses are two inch boards; the place for the fire is in the center of the house; it has a bordering of sea shells, broken very fine; the smoke gets out through a hole in the roof. The stick hanging over the fire with the chains is used for smoking fish, or if wished, cooking them. The other one is for drying clothes by. The little room on the upper bench is a sort of box bed. This sort of house will soon be a thing of the past. Since 1883 they have been pulling down the old houses and rebuilding after our style.

Yours Respectfully,

Oakvale, June 10, 1884.

JAMES DEANS.



*Editor Am. Antiquarian:*

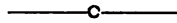
In reply to request, I mail you prints of a number of arrows in my collection. My collection consist of

Arrows and spears, (the pick from about 75,000,).....	5,000
Mortars from one ounce to 25 lbs. weight,.....	20
Pestles, pounders and hammers,.....	50
Beads and pendants,.....	25
Sinkers,.....	10
Scrapers,.....	25
Knives,.....	7
Grave ornaments and other carvings,.....	10
Highly carved pipes from B. C., (not prehistoric,).....	8
Articles unknown,.....	20

Mrs Kunze, of Umatilla is the only person having a large collection that I know

Oregon City, Ogn., July 25, '87.

H. C. STEVENS.



**THE KENTUCKY SILVER FIND.**

*Editor Am. Antiquarian:*

In your July number of the ANTIQUARIAN Mr. T. H. Lewis has replied to an article of mine which appeared in the May number.

In my article I stated: "Details of the work and find almost lost." I also wrote to the Mr. Brown mentioned by Mr. Lewis, and he says (as did my article,) "The relics were found by two boys whose names I do not remember." Mr. Mercer also corroborates Mr. Brown's statement. Mercer talked with the boy who brought the relics to Cincinnati. This boy was one of the two who did the digging.

I may have been mistaken in the location of the mound, as I never was at Portsmouth, but relied upon what Mr. Mercer said, having obtained most of the information concerning the find from him. But this I *do know*: the axe was not found with the

silver relics, but was found near the Old Fort in a corn-field. The silver and skeletons and beads *did come from a mound*, although near the surface. What became of the other silver I do not know. Mr. Lewis claims that there was more found, and if there was it certainly ought not to be lost or scattered.

In my narration I meant to convey the idea that the find was *historic*; of course it is not prehistoric. The mound may not be directly opposite Portsmouth, in stating that it was I relied upon the word of others; but it is certain that this mound is not far off, and that its contents are quite valuable.

Copper seems to have been in use among the Ohio River Indians. I have in my possession two axes similar to those described by Mr. Lewis which were taken from a "wash out" not many miles above his city. The bone, shell and stone implements described in the previous article and stated as found "on the banks of the Ohio above Portsmouth" were not found a *short distance* above Portsmouth as Mr. Lewis supposes, but were found in high clay banks nearly fifteen miles up the river.

Xenia, Ohio, August 6th, '87.

W. K. MOOREHEAD.

6

#### WELDED COPPER SPEAR.

*Editor American Antiquarian:*

In reply to your circular I would say that I have an ancient copper spear showing that it was welded *by fire* to the short part or handle end; found in an ancient mound in Ironton Township, Wis.

Yours truly,

C. F. GUNTHER.

Chicago, Dec. 11, 1886.

#### A GAME DRIVE.

*Editor Am. Antiquarian:*

Hidden from view in a dense woods, on the south side of the Kittatinny or Blue Mountains, about three and one-half miles east from where the Lehigh river flows through the mountain, forming the Lehigh Gap, and about one and a half miles west from the post village of Danielsville, in the north-western county, Penn., is situated an ancient structure which I wish to bring to notice. Here, caused by the water accumulation of heavy rains rushing down its side, can be seen extending from near the summit to the base of the mountain, a gully from four to eight feet deep, irregular in width, and about one mile in length. Along and on each side of this natural incision is placed a line of stones, irregularly thrown together, and varying in height, from one to three feet apart from each other, near the

summit several hundred feet apart, they converge toward the base of the mountain where the distance is about fifteen feet. Here, the ends of both walls are about five feet high. This opening was perhaps the mouth of the drive. A few steps from this passage extending in the same direction are a number of similar walls thrown together in the same manner. Overgrown with trees and shrubbery, and partly covered with vegetable matter decaying here for perhaps centuries one is prevented from telling their original height, which was perhaps much greater than at present. The mountain at this spot attains an elevation of some seven hundred feet, and the gulch with its lines of stone tends up its side in a slightly slanting direction. On the summit still grows the winter-green plant, and the boxwood brush or tree, Deer, I am told, are partial to this food, and in olden time, still in the memory of the oldest inhabitant yet living in the vicinity, congregated here to feed on their favorite sustenance which grew in great profusion.

Here, then, the Indian watched for the gathering, and as a herd approached to feed forced them with hideous yells into the drive. Dead branches of trees and brushes perhaps added to the height of the stone walls, back of which were stationed savages who were to slaughter the animals in their frightened and terrible career down the steep enclosure, none of which were ever fortunate enough to escape. The short parallel walls at the mouth of the drive were no doubt erected to prevent the escape of an animal had it been fleet-footed enough to get through the drive.

Three miles south from this place, in the vicinity of the post village of Cherryville was once a place of encampment of the Indians. Many fine objects of stone have been found here, a number of which are in the writer's cabinet.

In 1732 was laid out here by order of the proprietors, a reservation of 6,500 acres in which to experiment in civilizing the Indians, a number of whom were induced to settle on this spot.—[History of the Lehigh Valley, M. S. Henry, Easton, Penn., 1860, p. 301.

This section is up to the present day called "Indian Land." The remains of the primitive people who lived here before the advent of the European are exceedingly rare, and it is only by close questioning and careful search that their whereabouts can be discovered. They had, it appears, not the desire to rear structures as are still to be seen in other parts of the United States. The learned archæologist, E. G. Squier, truthfully writes: "The Indian tribe found in possession of the country now embraced within the limits of New England and the Middle States have left few monuments to attest their former presence. The fragile structures which they erected for protection and defense have long ago crumbled to the earth, and the sites of their ancient towns and villages are indicated only by the ashes of their long extinguished fires, and by the few rude relics which the plough of the invader exposes to his curious gaze. Their cemeteries, marked in very rare instances by enduring monuments, are now undistinguishable, except where the hand of modern improvement encroaches upon the sanctity of the grave.

The forest trees, upon the smooth bark of which the Indian hunter commemorated his exploits in war, or success in the chase—the first rude efforts towards a written language—have withered in the lapse of time, or fallen beneath the inexorable axe. The rock upon which the same primitive historian laboriously wrought out his rude, but to him significant picture, alone resists the erosion of years. Perhaps no people equally numerous have passed away without leaving more decided memorials of their former existence. Excepting the significant names of their sonorous language, which still attach to our mountains, lakes and streams, little remains to recall the memory of the departed race.

Allentown, Penn.

A. F. BERLIN.

---

### PERFORATED STONE FROM OHIO.

*Editor Am. Antiquarian:*

The following is in my cabinet. The young men of the neighborhood have presented them to me from time to time. The most of the arrow points were found on the farm of Jesse Clark, Moulton township, Auglaize County, Ohio: 415 arrow points (perfect), 3 pestles, 23 fleshers, 15 stone axes, 5 stone hammers, 1 iron tomahawk, 1 stone tomahawk, 14 shuttels (perfect), 2 stone pipes (small ones), 1 badge or wand, 1 tube or call, 1 pipe shaped stone purpose unknown, 1 stone ten inches long pointed at ends, 1 stone shape of plumb bob, 2 odd pieces hard to describe, 25 miscellaneous specimens, 1 stone size of turkey egg perforated through the center and concave—a pretty specimen. Would like to know what was its use and name.

D. W. LAWRENCE.

---

### WERE THE MOUND BUILDERS INDIANS?

*Editor Am. Antiquarian:*

As I am a constant and thoughtful reader of the AMERICAN ANTIQUARIAN I write you this letter of inquiry, hoping that your answer will assist me materially in the study of the facts and theories of the science of Archæology. This science presents a great many facts, but the difficulty is in the rational and true interpretation of these facts. In the works that I have read from the pens of different authors I find a great many theories that do not agree with themselves, with each other or with the facts. What reliable and conclusive evidence have we that the stone implements were not made, and the mounds we find scattered over the American continent were not constructed by the Indians who were found in the possession of this territory by the white men when they first landed on the Atlantic coast? Upon what facts do Archæologists



construct the theory that they are works of a different race, and the remains of an older and higher civilization? If the Indians were not the builders of the mounds, then who were the Mound Builders? This question has been answered in different ways by different writers, but the answers are not satisfactory because they do not appear to rest upon established facts nor are they proved by conclusive evidence. Are there any facts in the light of which you can affirm with reasonable probability to what race the Mound Builders belonged? I am a student of Archæology, an honest and earnest investigator, and I am in hopes that you will help me by giving as clear answers to these questions as you may be able to do from your superior knowledge of the subject.

WM. TUCKER.

Mount Gilcad, Ohio, June 27, 1887.

---

### STONE PAVEMENTS AND CREMATION ASH HEAPS.

#### *Editor Am. Antiquarian:*

The Fortney mound is situated twelve miles west from Alexandersville, and one mile south-west from Farmersville. It occupies a position on the crest of a precipitous cliff bordering Big Twin on the north, about one-fourth of a mile east from an ancient protective enclosure:

This mound is in the form of an ellipse, and is ninety feet in its longer diameter, which is on a line with the cliff east and west. I could not determine its shorter diameter with any exactness, from the peculiarity of its position, which was partly on the level and partly on the declivity;\* but it will not vary much either way from fifty feet. Its height at present is thirteen feet, but "old settlers" remember when it was much higher. I have very little confidence in these declarations, as I find they are in many instances unreliable, and the example before us is not an exception. The proof consists in the presence of an oak tree near the eastern crest, which is quite too large to have attained to its proportions in the memory of even the "oldest inhabitant," and tradition is not admissible. The truth is, the mound is truncated, which is demonstrated by the existence of a graded way which extends from the summit to the base on the west side, resulting in a sharp prolongation at that point, which is near the crest of the cliff. On the east side the ascent is more difficult, and on the north I found the angle, by the clinometer, marking forty degrees. On the south, or cliff side, a large section had been cut down, presenting a perpendicular exposure eight feet wide and ten feet six inches high, and hence a rare opportunity for the study of these unique accumulations. In

---

\*The position selected in the above example is a most remarkable one. It would seem that the ashes were carried there and poured over the crest until the pile swelled up and spread over the level land. Of course the depth of the mass is much greater on the declivity than on the level.

this example the depth of the clay cover is five feet and a half, and we have an exposure of five feet in depth of the ash heap. This gives us three feet on the level with the addition of several feet on the declivity. But as the excavation does not reach the surface the actual depth of this remarkable deposit is at present conjectural. The diameter of this ash pile cannot be determined without an immense expenditure of labor. But the horizontality of the line which separates the clay envelope from the ash heap, and which is sharply marked, is strongly suggestive of vast proportions.

The prevailing color of these collections is a light yellowish grey when dry, but assumes a darker shade when damp. The example before us presents a mottled appearance, caused by isolated deposits of a dark color inclining to black, which appears to be due to microscopic particles of charcoal. With these black "pockets," the yellowish white nodules of Springfield clay and bone dust contrast very strikingly.

This description would be incomplete without some reference to an interesting appendage to which my attention was directed by the courteous proprietor, Mr. Fortney. It consists of a paved work in the form of rubble which covers a space fifty feet in breadth and ninety feet in length, or the entire length of the mound. At one point, namely, the base, or terminus of the mound, the graded pathway extends under the mound. The material consists of flat limestone, recent conglomerate, boulders and grey-heads, some of which would weigh probably one hundred pounds. The entire space indicated is thickly overspread and covered with a thin coating of soil. In the execution of this work there was no effort at precision; but the stones were thrown down without regard to order or symmetry, hence in some spots they occur in great abundance, in others they form a single stratum; but where this form is noticed the depth of the pavement is maintained by the increased size of the boulders, resulting in a level surface.

A wagon road, which is located near the base of the mound, is completely paved from one side to the other, which might lead to the inference that the work is of recent date, and that these stones had been transported with the view of repairing the road; this, at least, was my own conclusion; but Mr. Fortney speedily dissipated this error by digging out with his mattock, in my presence, large quantities of stone, not only in the beaten track, but in the fence corners and in the field adjoining where, at a distance of fifty feet from the base of the mound, the work ceases abruptly. The compact character of this pavement may be inferred from the fact that at any point within the area the stroke of the pick is arrested by a stone. There is a singular absence of stone in the vicinity, except in the bed of the Twin, from whence the flat limestones, at least, must have been procured, as the bedded rock have been removed from a large area, and an immense Loess bluff deposited in its place. Mr. Fortney pointed out the locality from whence the recent conglomerate, used on the occasion had been taken, which is on the

side of the cliff where it crops out in the form of cemented sand and gravel.

But we have an incontrovertible argument in support of its artificial origin, based upon the mixed condition of the underlying soil, which is a black loam with which yellow clay is blended, exhibiting unequivocal evidence of disturbance. It is a singular fact that beyond this pavement is a yellow tenacious clay, covered with a thin soil, also yellow. I conclude therefore that the black soil, underlying the paved work, was transported. Evidence of this strange performance is not wanting, but the object is obscure.

As this work, in its general features, resembles a "fire bed" on an extensive scale, we sought dilligently for some evidence of it. But aside from one large boulder which exhibited marks of heat, our search was fruitless. I have no conjecture to present, as to the object had in view; but the labor involved in the transportation of this amount of stone, the greater part of which was carried up the face of a mound eighty-six feet in height, would seem to justify us in attributing to it a more than ordinary significance.

What was the probable object of these strange observances? If these vast heaps consist of ordinary wood ashes, what value did they possess, in the estimation of this people, to merit such extraordinary solicitude? We know that ashes, in isolated deposits, or as an important ingredient in stratification, is a prominent feature in mound sepulture; from which it may be inferred that a superstitious efficacy was attributed to them.

But the subject becomes more complicated and obscure from the fact that in some instances these piles are diffused with foreign substances, as microscopic particles of sand, nodules of burned clay, and Springfield clay. Furthermore, it will be remembered that in two instances the burned crust was present, which is a common accompaniment of interment by cremation. And if to this we add the discovery of a gorget on one of these burned covers, we are presented with a train of conditions wholly at variance with our conceptions as to the common sense of this people. Viewed, however, in the light of human reliquiæ the above conditions assume a tangible and intelligent aspect. In this light then we will briefly "look into it."

It is well known that cremation was a prevailing form of interment among the Mound-builders, although inhumation was occasionally practiced; but the examples are so rare, so inadequate, in view of the dense population which once existed here, that they are now commonly recognized as the tombs of rulers and others high in authority. We must therefore seek elsewhere for the ashes of the common people. How were they disposed of? If by inhumation, their burial places are still concealed from us. But assuming that these ash heaps contain the aggregated remains of the masses, cremated in various and distant parts of the country, and at stated periods, deposited on one pile, we have secured a ray of light, and the mystery is divested of part of its charms.

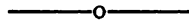
In summing up the arguments in support of this assumption it

may be stated that small mounds—mere mole-hills, are occasionally discovered, characterised by a burned clay crust several inches thick, under which we find charcoal, ashes, and bone dust. The inference is that here a body was consumed, then covered with clay on which a fire was built and continued until a brick-like crust was formed. A few inches of earth was then superimposed. In this manner the remains may have been protected until the proper time arrived for a general interment.

As Springfield clay is often found in burial mounds as covers, it is presumable that this material, when accessible, was employed on these occasions. On removing the ashes, a large amount of extraneous matter would necessarily be gathered up with them. Hence the presence of these foreign substances.

But the strongest evidence of their human origin is based upon the burned crust, and the ample clay envelope. Now, although these proofs of "fires" are not always present in sepulchral mounds, *I have invariably found human remains beneath them.* The clay envelope is a mark of affection and profound regard.

S. H. BINKLEY.



## Editorial.



### THE GREEN STONE AXE.

#### IS IT A "CHALCHIHUATL?"

*Part. 4. Q.*

The unsatisfactory nature of a crowded session of a scientific association was illustrated by one little incident which occurred at the recent meeting of the A. A. A. S. in New York. At that meeting Mr. G. F. Kunz brought into the room occupied by section H., a beautiful green stone axe which was discovered in Nicaragua. The axe was so unique and so strange that all were at once interested in it, but unfortunately no opportunity was afforded to express an opinion concerning it, and the session closed without any explanation. Our readers will however be pleased to know that these stone axes are not so strange and curious as at first seemed, and that they can be easily explained.

By turning to the proceedings of the Am. Antiquarian Society for 1881, they will find a very interesting article on the subject by a very competent archæologist, Prof. Phillip Valentini. This article is based on Prof. Fischer's work on Nephrite and Jadéite. These are the remarks which he makes. "Green and blue glass beads were objects of a lively barter between the natives of Yucatan and the crew of Cordova's expedition in 1516. The Spaniards were ignorant as to the ground of the predilection of the natives for these

trinkets. It was found afterward that green stone axes and relics called chalchihuites were regarded as having marvelous powers. They were not only used for the cure of a disease of the kidneys, but were regarded with great veneration, for if the stone were laid upon the tongue of the deceased it would help the soul to pass the severe ordeals before reaching Quetzal Cohuatl, Heaven. The same story of the magic and medical power inherent in the green stone was found by the learned Europeans to be also in vogue with Asiatics. A large number of nephrite celts have been dredged from the Helvetic Lakes, and were common among the Swiss Lake Dwellers. Nephrite has nothing in common with the emeralds or other jewels of green color. It belongs to the hornblende is a varied light green. It is very hard. Only the diamond is able to make an impression upon it. There are three varieties of this green stone mineral. First, is nephrite proper; the second jadëite; and the third, chloro-melanite. Jadëite and chloro-melanite are chemically different from nephrite, whose magnesia is represented by argillaceous earth. They are not so homogeneous and the color is a spinach-green. Chloro-melanite is interspersed with yellow particles. The home of the nephrite is Turkestan. It forms a system of massive rock-like sand-stone trap or granite. The Emperor of China has monopoly of the nephrite mines here. Another home for nephrite is New Zealand, and a third in Irkutsk. Turkestan seems to be the starting point of most of the nephrite relics. Nephrite mines are known only to exist in Asia.

Nephrite and jadëite differ from serpentines, felsites, silicates, orthoklas and saussurites, which are called by Prof. Fischer falso-nephrites.

The home of the jadëite was found to be in mines which belonged to the King of Burmah, whose dynasty from time immemorial had enjoyed the monopoly of selling objects manufactured from the precious green stone.

The Mexican chalchihuites are supposed to be green silicates whose mines are located in the "Cerrillos" of Mexico.

Ten specimens of jadëite and chloro-melanite were taken from America and they found their way into Prof. Fischer's cabinet.

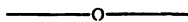
The nephrite stone shaped by the ancient Orientals to the form of a celt, is not only discovered in Asia, but also in Europe and America. Therefore pre-historic communications by the Asiatics with Europe as well as America is suggested. This is the conclusion reached by Prof. Fischer. Prof. Fischer made a large collection of green-stone relics. He found about one hundred and eighty-nine of pre-historic nephrites. They show a remarkable similarity of shape, having either the forms of chisels or of celts. None of the European specimens show ornamental carving.

Mr. Valentini made a remarkable discovery in connection with a green-stone chalchihuatl which was dug out from an ancient grave in Costa Rica. The stone approached the celt in form. One side of it was polished, the other side had been carved. The workman had begun to saw lengthwise but had preferred to break the stone

into halves. It was unknown by what instrument the cuts were made or the polish secured. It is supposed that the sawing of stone was practiced by the Mexicans with string and sand. Prof. Valentini describes two nephrite tablets or Chalchihuites, as he calls them, both of which had been sawed. His explanation of the sawing is ingenious. He says that nephrite ceased to be imported into America and that it became very scarce. But the sacred character of the stone continued. The supposition is that pieces were sawed off from the Chalchihuites and were placed on the tongue of the deceased as a sort of charm or passport to carry the soul to the native paradise. Prof. Valentini then goes on to describe the two Chalchihuites, one of them in the museum of Leyden, called the Leyden Plate, and the other preserved in the Berlin museum called the Humboldt Celt. Both of these he maintains came from America, as they contain Central American symbols. He finishes the article with an explanation of the symbols carved upon the relics and concludes with the following words: "But, if I look at our strong, massive specimen, and consider that there exists still others of its kind, and even of a much larger size, I feel positively at a loss for a suitable explanation, and still more at loss to state the special work these large thick celts were able to perform." Now the peculiarity of the green-stone axe exhibited by Mr. Geo. F. Kunz at the American Association is this, that it has a Malay face upon it.

It is a heavy, thick, clumsy looking celt made with square corners and resembles a wedge as much as it does a celt. It has also cuttings on the back as if two pieces had been sawed out of it. It is probable that the pieces had been taken out of the back and had been put to the same use which Prof. Valentini suggests: placed on the tongue of some deceased person to give a safe passage to the soul. But the Malay face shows the origin of the stone. The figure is carved in low relief. The arms are folded below the face and in the hand there is a small figure of a celt or stone ax. The face covers the large and heavy part of the wedge. It is a Malay face, the eyes, the lips and the whole contour of the countenance showing that it is. We have then in this single relic good evidence of contact with the Asiatic continent.

The date of the stone or of its carving is, course, unknown and yet the cutting upon the back would show that the stone had been used in the pre-historic times before the importing of nephrite and jadeite had ceased. It is a very interesting relic and one that suggests more than might at first be supposed.



## MUSEUMS IN NEW YORK.

The opportunity of visiting the museums in New York on the occasion of the meeting of the A. A. A. S. was doubtless improved by others. The editor of the *AM. ANTIQUARIAN* would, however, take the occasion to express his gratitude to the gentlemen connected

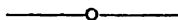
with these museums for their kind attention and for the time given by them in pointing out objects of interest. The Editor would extend thanks to the following gentlemen:—Prof. Isaac P. Hall, Gen. Lewis P. di Cesnola, of the Metropolitan Museum; Mr. L. P. Gratacap of the Museum of Natural History, to the Secretary and Librarian of the Long Island Hist. Soc'y in Brooklyn; to the Committee on Entertainment for the opportunity of visiting the Museum on Government Island, and the objects of interest at West Point. Also to Mr. Geo. F. Kunz, who politely invited the editor to attend the Geologists in their excursion to Hoboken and the pleasant entertainment given at his private residence.

Thanks are also due to the Librarian of Columbia College for access to the hidden stores of pamphlets and books, and to the President of the Hamilton Club House of Brooklyn for seeing the interesting painting of Washington and his Friends which adorn the walls of the elegant rooms.

At the Metropolitan Museum we had the unusual privilege of gaining access to rooms which are generally closed to visitors and to inspect certain curiosities unknown to the public. Gen. Cesnola kindly took the editor into these rooms and pointed out many extremely interesting objects. Among them a number of mummies which have been secured from Egypt, the possession of which has not been made known to the public. Also a series of casts of ancient art, such as the Lion Gate at Mycenæ, etc.

In the museum at Government Island, there are several complete costumes of Indian warriors with their feather head-dress, buckskin leggings and other native trappings, all of which are difficult now to secure, at any rate in their genuine aboriginal condition and not made to order.

There is another museum in New York which contains some very interesting antiquities, namely, that of the Historical Society with its Abbott collection of Egyptian mummies and relics, which we did not see. It is generally closed during the months of July and August, therefore we did not reach it, though we understand that access was gained by a few.



## THE MUSEUM OF NATURAL HISTORY.

In 1879 the AM. ANTIQUARIAN contained a notice of the latest acquisition to the ethnological collections of this museum. The De Morgan collection, so called after its originator, a French nobleman, purchased by Robert L. Stuart, Esq., consisting of implements, of the following groups of objects: Implements of the Archæolithic and Neolithic Periods, from central France, excavated in the Loire Valley. Specimens from the south of France, from the caves of Dordogne, including a fine series of bones, many of them engraved. Implements from the gravel beds of Warren Hill, Suffolk, England, from excavations personally conducted by Canon Greenwell, of Durham Cathedral. Obsidian instruments,

from new discoveries made in ancient Crete and Greece, which bear a striking resemblance to objects of the same material found in Mexico. A select series of stone and bronze articles, from the Swiss lakes, is one of the most interesting features of the collection. This consists of numerous objects of syenite, diorite, porphyry, jade etc., most of them in their original handles of stag-horn; also clay vases and fossil bones of arctic animals. The collection illustrating the Bronze Age contains numerous ornaments, axes, razors, fish-hooks, etc. The Bronze Age of Great Britain and France is also represented by a choice set of arms and tools. Since that time the museum has received the large collection formerly belonging to Col. Chas. C. Jones, Jr., illustrating the pre-historic archæology of Georgia and the Southern States; also a portion of the Squier & Davis collection, that portion which was not sent to the Blackmore Museum, England, consisting mainly of pottery vessels and vases from Ohio and others from Mexico. Besides these are several other valuable collections, chiefly a large collection of wooden specimens from the Northwest coast, purchased by Mr. Frank Boas. Among these are many manufactured relics such as wooden columns or ancestral posts, wooden idols and masks which have little archæological value, although they illustrate the ethnological customs of the region from which they were brought. The arrangement of the archæological relics is somewhat imperfect. The collections of individuals where they are large enough is well, but where pottery from the mounds of Mexico are placed in the same case with a dried up or salt-preserved body from a cave in Tennessee, and a miscellaneous assortment from various places, the arrangement does not seem so satisfactory. The advantage furnished by this collection is that one may compare the flint relics, both paleolithic and neolithic, from France with the neolithic relics from the U. S., although it would be still better if there were paleolithic relics collected in America in the cabinet for the purpose of comparison.

It should be said that the large collection of Mr. A. E. Douglas occupies one of the rooms of the building. This consists of a large number of flint implements from Missouri formerly owned by Mr. J. E. Jones, Keytesville, Mo.; also a large number of bronze hematite relics of perforated tablets, mainly from Ohio, of arrow heads from all quarters, and of carved pipes of various patterns. Mr. Douglas' collection is very valuable and taken with the collection made by Mr. C. C. Jones of Georgia, would very well represent the prehistoric archæology of the entire Mississippi Valley. Mr. James Terry has also in the museum a large collection of stone relics, many of which he has gathered in Oregon and on the Pacific coast. The collection of stone relics in the Museum of Natural History of Central Park is one of the most complete in the United States. It at least furnishes the foundation for a department in the museum which is not to be despised, but which needs only the personal superintendence of one who is an enthusiast to grow into one of the very best in the United States.



The ethnological collection is a good one. Implements of wood are gathered here from many countries, mainly from the Islands of the sea, such as the Feejee and Caroline Islands.

---

### DEATH OF PROF. AVERY.

We are sorry to record the death one of our associate editors, Prof. John Avery, of Brunswick, Me.

Prof. Avery was an indefatigable student and a most excellent scholar. His specialty was the Archæology, Ethnology and Philology of the uncivilized tribes of the Far East, and no man in America and perhaps no man in the world was better informed on the subject than he. These tribes may properly be called Indians though their residence is in the far east, and in the midst of the civilized races of the old world. The readers of the *ANTIQUARIAN* will have noticed how valuable Prof. Avery's researches are, especially as they brought out the parallel between the native customs of this region and those which prevailed in this country. The department must however be dropped, for no one can fill Prof. Avery's place. The last line written by his hand was a reference to the proof of the notes contained in this number.

We are glad to bear our testimony to the unvarying kindness, the enduring patience, the thorough conscientiousness, the modest quiet spirit, the sincerity and the manliness of our associate.

He was given up to his favorite studies, having just resigned his position that he might prosecute them more fully.

He was acquainted with fifteen languages and was well informed in all oriental matters. His articles have been published by the Oriental Society, by the Philosophical Society of Great Britain, and by the *AMERICAN ANTIQUARIAN*, and have been read and appreciated by the best scholars in this country and Europe.

Prof. Avery began his literary career while an instructor in Grinnell College, Iowa. His connection with the college at Brunswick gave him better opportunities and he improved them to the edification of others. It is a misfortune to have such a man cut off in the midst of his days. Prof. Avery was a christian gentleman. He was a member of the Congregational church, a teacher of a large Bible class and a useful man. His publications must, however, be his monument and we are glad to say that the *AMERICAN ANTIQUARIAN* contains the most of them.

### DR. CHAS. RAU.

One of the most eminent archæologists of the United States was Dr. Chas. Rau of Washington, D. C. We had been informed of his sickness by a letter in his own hand writing, very much as in the case of Prof. John Avery. We were shocked at the announcement of his death. It would seem as if the editor had been favored with the last words of two very worthy men. Dr. Rau was a

very reliable scholar, a very careful investigator and an excellent classifier, and during his connection with the Smithsonian had come to be regarded as one of the chief authorities in the department of American archæology. His articles on the Stone Age in Europe published in Harper's Magazine has also given him considerable reputation as a popular writer and author. The books which he has written may be regarded as standards.

*Part. 4. 2*

## LITERARY NOTES.

BY THE EDITOR.

**ANTIQUITY OF MAN IN THE UNITED STATES.**—Col. Charles Whittlesey has obtained evidence of the existence of two races of man, and possibly of a third intermediate race, as having held possession of the northern portion of the American continent—the more recent of them being the North American Indian or red men; the earlier race he terms the mound-builders. The antiquaries of Europe regard the people who used flint instruments as being prior to those who had implements of stone; and the latter, again, as older than the races using bronze or other metals. In the United States, the race next prior to the white man had very few implements of stone; their knives and arrow heads, their war implements and their agricultural tools, were almost entirely flint; they had very few and rude instruments of native copper. The mound-builders, on the contrary, who preceded the red men, produced tools in the reverse order; their axes, adzes, and mauls were very numerous, and sometimes of stone; their copper tools abundant; but those of flint very rare. Hence, in this instance, the most ancient people were the most industrious; they cultivated the soil; they possessed more mechanical ingenuity, and left more prominent and permanent monuments. On the Atlantic coast, from Nova Scotia to Florida, are numerous shell heaps, identical with those of Sweden, Norway, and Denmark, and known as *kjækkenmæddings*. The examination of several caves gave bones of the wolf, deer, bear, rabbit, etc., mixed with skulls of the red race, and not dating back apparently more than 2000 years. Col. Whittlesey estimates 2000 years as the period also of occupation by the mound-building race; which does not take us back as far as the beginning of the historical period in Asia and Africa.

**NUMISMATIC AND ANTIQUARIAN SOCIETY.**—The usual stated meeting of the Numismatic and Antiquarian Society was held on the evening of the 1st inst., at its hall, Eighteenth and Chestnut streets. Mr. Edwin A. Barber submitted a paper on the secret habits of the North American Indians, and a discussion on the subject followed, which was participated in by the members present.

Mr. Phillips presented two papers by Dr. Macedo, of Lima. 1. The penal system of the Incas. 2. Their system of fortifications. He read various notes of interest, among others one referring to the reply of M. Lucien Adam to Dr. Brinton's strictures on the *Taensa Grammar and Dictionary*.

Mr. Outerbridge made a communication in reference to a collection of ancient coins which had been sent by Mr. Williams to Mr. Whitney with the Assyrian slab shown at the May meeting, and exhibited specimens of the silver pieces of Demetrius, Soter, Heracles, Arsinoe, Cleopatra and Ptolemy, together with an Assyrian seal from Nimroud. The latter consisted of a small perfo-

rated cylinder of hematite engraved with the figure of a king and an inscription in cuneiform characters, and probably dated about 1000 B. C.

The President exhibited a cast made by the Smithsonian Institution of the tablet discovered in an Ohio mound by Rev. Dr. McLean, and said that it was of the same character as the other tablets that had been found.

There was also exhibited an Indian iron tomahawk, a probable relic of the French and Indian wars; a curious Indian shrine of carved wood; a Chinese flute made of bamboo, and two Chinese tobacco pipes of wood, resembling apple, one with gold fish and the other with a figure of a seal and a bird carved in relief.

Mr. Edwin A. Barber presented the society with 200 pamphlets relating to archæology and ethnology.

The death of the Hon. George Harrison, a member of the society, was announced as having taken place on the 9th of September, in the 74th year of his age.

It was moved that the special thanks of the society be tendered to Isaac Myer, Esq., for the gift of his beautiful book on the Waterloo medal.

PROGRAM OF A. A. A. S. FOR 1887.—Section H.—Anthropology Vice President, D. G. Brinton, of Media; Secretary, Chas. C. Abbott, of Trenton. Member of Council, Amos W. Butler, of Brookville. Members of sectional Committee, S. D. Peet, of Mendon, Frank Baker, of Washington, Wm. M. Beauchamp, of Baldwinville. Members of Sub Committee on Nominations, Joseph Jastrow, of Baltimore, Philo Hoy, of Racine, Stewart Culin, of Philadelphia. Papers Read: Aboriginal New York Villages, 25 m., by W. M. Beauchamp. Recent archæological investigations in the Champlain Valley; 15 m.: by G. H. Perkins. Study of a small and isolated community in the Bahama Islands; 20 m.: by T. Wesley Mills. On the correlations of certain mental and bodily conditions in man; 20 m.: by Chas. Porter Hart. What is it? 15 m.: by E. W. Clappole. On the assumed mythical character of Professor Heer's Atlantis Theory; 15 m.: by J. Kost. Illustrative notes concerning the Minnesota Odjibways; 20 m.: by Miss F. E. Babbitt. China in America; a study in the social life of the Chinese in the Eastern cities of the United States; 16 m.: by Stewart Culin. The true basis of ethnology; 20 m.: by Horatio Hale. Sensory types of memory and apperception; 25 m.: by Jos. Jastrow. Music and poetry of the Eskimos; 10 m.: by F. Boaz. The Palæolithic age in America; 15 m.: by S. D. Peet. The subdivision of the Palæolithic period; 15 m.: by D. G. Brinton. The Indians of British Columbia; 20 m.: by F. Boaz. Totemism and animal worship; was it confined to the races who were in the hunter stage? 15 m.: by S. D. Peet. The Serpent Mound of Adams Co., O.; 15 m.: by F. W. Putnam. On the preservation of Aboriginal remains in America; 5 m.: by Alice C. Fletcher. System of symbols adapted for American Prehistoric Archæology; 10 m.: by Will De Hass. On the Santhals of Northeastern Bengal; 30 m.: by S. Kneeland. Anthropology as a study in a college course; 5 m.: by G. H. Perkins. Some of the unsolved problems connected with the stone age; especially as to its subdivision; 15 m.: by S. D. Peet. The Niam Niams and their neighbors; 10 m.: by Franz Boas. Evidences of a pre-Indian occupation New Jersey; 15 m.: by Chas. C. Abbott. Some aboriginal dwelling sites in the Champlain Valley; 7 m.: by D. S. Kellogg. The relation of archæological remains to river terraces; 10 m.: by A. W. Butler. Preliminary studies of Platycnemic Tibiæ;

20 m.: by Frank Baker. The philosophy of wit, humor and satire; 15 m.: by Melville D. Landon.

JADE in British Columbia is the subject of a paper read before the Natural Hist. Society of Montreal by Dr. G. M. Dowsman, March 28. Several specimens were exhibited.

GEOLOGY OF PALESTINE.—The committee sent out by the Palestine Exploration Society in 1883-4, reached some very interesting results in determining the geological structure of the Holy Land. Five districts were discovered as follows:

1. The Maritime District stretching from the Isthmus of Suez along the coast to the base of Mt. Carmel. This has an average elevation of 200 feet formed of post-pliocene sands and gravels upraised since the pliocene epoch.

2. The Table Land of Western Palestine formed of cretaceo-nummulitic limestone disposed in the form of an arch with an average elevation of 2500 above the sea. A very ancient follows along the line of the water-shed, along which most of the villages, Shecken, Nain, Sychor, Bethel, Jerusalem, Bethlehem, and Hebron were built.

3. The line of the Jordan, the Gher of the Dead Sea, and the Arabah depression, caused by a great fault or fracture of the strata, composed of cretaceous limestone on the west side of Nalion, sandstone on the east side and crystalline rocks at the southern extremity. The opinion is that the Dead Sea formerly filled the entire valley to a height of 1800 ft. above the present level. There are terraces on the Gher of the Dead Sea which correspond with those on the Mediterranean. The waters of the Jordan never flowed into the Gulf of Arabah, but a lake filled its valley for 200 miles from Merom or Huleb to the Arie Afu Weridel.

4. The table land east of the Jordan, with a level of 5000 ft., formed of cretaceous limestone resting on Nubian sandstone. The valley of the Arobat is situated in this district a valley traversed by the Israelites on their way from Mt. Hor to the fords of the Jordan and by the Queen of Sheba on her visit to Solomon.

RINGS IN ANCIENT TIMES.—The peculiar veneration with which the ring form was regarded by the early English is very noticeable. The great Midgard serpent which held the cosmos together performed this feat by holding his tail in his mouth so as to form a gigantic ring. Thus the smith was accustomed to think of the ring as the highest and most perfect of forms. Golden rings or bracelets were worn upon the arm and these were bestowed by the king or yarl upon the warrior who distinguished himself. Some of these bracelets, especially the silver ones, were made in the form of snakes coiling in many folds around the arm. Some were delicately worked to represent fragments of serpents intertwined. The helmet or hat was protected by a ring of steel around the base, and the armor was also made of rings. Rings of gold and silver and bronze were also used as currency by the Scandinavians, who paid for the tin found among the Britons in this way. The ring money of the Kelts and Cymri is spoken of by Cæsar. The pet name the Danes applied to themselves was Ring Danes. It is possible that the earth rings that were common in Great Britain at an early date, were derived from the Dane superstition, or rather from a mingled serpent and sun worship, the

symbols of the worship thus being embodied in their sacred enclosures as they were in their personal ornamentation, as the cross in modern times may be seen in the chapel of churches, in the symbol on the steeples, or in the personal ornaments of the devout.

**ORIENTAL GRAMMARS.**—Under the title of *Porta Linguarum Orientalium*, a series of short oriental grammars has been published; a Hebrew grammar by Herman L. Strack, an Arabic by Socin, a Syriac by Nestle, a Ethiopic by Pretorius. In addition to the four here mentioned, Latin grammars of the Chaldee (Armaic), the Samaritan, and the Armenian languages, by Petermann, were published years ago, and are to be issued in new editions in the near future. There are also announced as forthcoming numbers of this series, a Targumic grammar, by Merk, of Heidelberg; a Persian grammar, by Seybold, of Maulbronn; a Turkish grammar, by Gosche, of Halle; an Assyrian grammar by Frederick Delitzsch, of Leipzig; an Egyptian grammar, by Erman, of Berlin; a Coptic grammar, by Steindorff, of Berlin.

**THE ROSICRUCIANS.**—It is supposed that the ancient mysteries, templars, free masons and rosicrucians are secret societies concerning which the antiquarian has much to say. The department of literature has, however, never yielded any very great amount of solid and substantial facts, the purpose of most writers having been to hide the facts and continue the mystery. Mr. Hargrave Jennings, who has written on the Rosicrucians, and who comes forward as the historian of the order, has kept up the custom. "His book is simply a mass of ill-digested erudition concerning Phallicism and fire worship, the round towers of Ireland and serpent symbolism, offered with a charlatanic assumption of secret knowledge as an exposition of Rosicrucian philosophy."—*A. E. Waite in Walford's Antiquarian for Feb. '87.*

**ANCIENT LEGENDS OF IRELAND.**—Lady Wilde has written a book on the Ancient Legends, Mystic Charms, and Superstitions of Ireland. Chapters are devoted to the Wake Orgies, the Banshee, the May Festival, November Spells, the Baal Fires and Dances at Midsummer, Marriage Rites, the Evil Eye, Fairy Music, Superstition concerning Animals, Herbs and the Holy Wells, Medical Superstitions, Cures and Charms.—*Walford's Antiquarian, Feb. '87.*

**MOUND BUILDER'S CLOTH.**—A mound near Circleville, Ohio, has been excavated by N. E. Jones which is said to have contained an altar formed of bricks and mortar (!) covered with a bed of charcoal. On the charcoal a "winding sheet" which enclosed charred bones. "There were three wraps, all differing in fineness of texture but woven in the same way. Each of these wraps could be removed separately and in pieces of several yards in width and length. In this wrap was also a stone, the upper side highly polished, the lower side, or that resting on the charcoal, burned; and had the appearance of blood burned and adhering." The mound was 18 ft. high, 50x80 ft. diameter at the base; 25x40 ft. at the summit.—*The Journal of the Cincinnati Soc'y of Nat. Hist. April, 1887.*

**PRESERVATION OF MONUMENTS.**—A memorial has been sent by the Cincinnati Soc'y of Nat. Hist to the Legislature of Ohio, setting forth that the Old Fort, or Fort Ancient, was being destroyed, and asking that as a specimen of civilization and engineering skill of the ancient inhabitants, it should be prevented. The request was that it might be purchased and made a public park.

This is a move in the right direction. If the legislatures of other states could be aroused to the importance of preserving the monuments, or even of securing a survey and record of the monuments, it would be very desirable. Legislatures, however, are quite ready to appropriate money for the erecting of a race course in a fair ground, and spend hundreds of thousands of dollars in the purchase of grounds for agricultural farms and fairs, but the ancient monuments cannot be protected by law. Such at least is the case in most states. We hope that Ohio may be an exception and set an example to other states. By and by the legislatures will wake up to a sense of the value of these monuments, and wonder that they were allowed to be destroyed, but perhaps too late.

"WASTE LAND WANDERINGS."—The following is a quotation from the review of the last book written by Dr. C. C. Abbott contained in the *Literary World* for April 1887:

This keen observer had novel experiences; as when he "caught an unusually large mud-minnow, which had swallowed a pike; and in the pike's stomach was a small mud-minnow, and in its stomach were *the remains of a pike*. Four fish as one!" And also when he saw (p. 241) a cloud of mosquitoes "half a mile wide, and one hundred yards from front to rear," making a sound "like a train of cars passing over a bridge;" and witnessed a migration of red-wings numbering, as he thought, "fifty thousand birds in the flock;" and tried military tactics with seven fishes that kept in a row and advanced or retreated as he directed their movements; all of which indicates that this is a captivating book, one for the out-of-door literature department of your own or the public library." Dr. Abbott is the authority most relied upon at present for the existence of a Paleolithic age in America!

**MASKS AND THEIR PURPOSES.**—We have recently received drawings of bone idols from Mrs. Helen A. Kunzie, in which native faces are depicted, but with modern costumes. One idol has a human figure depicted on the lower part, but with the beak and face of a bird above it after the manner of the totem posts found in the northwest coasts. Another idol has a peculiarly owl-like looking face engraved upon it; underneath the face are knife-like or leaf-like ornaments which resemble a ruffie around the face, but they may have been intended to represent a feather head-dress. We have also been permitted to look at the collection of large wooden masks which have been gathered in the British possessions and placed in the Museum of the Natural Hist. Society of New York Central Park. These masks are very grotesque and resemble both the idols and the genealogical trees, at least in one particular—and that is the animal and human features are so blended together one would suppose that the three classes of relics were designed for the same purpose, or at least sprung from the same source, and yet in conversing with Mr. F. Boaz, who has made a study of the masques, we were informed that there is no religious significance to the figures, but they are merely grotesque carvings in which the natives perform their dances much as more civilized people put on outre costumes for their masquerade balls.

**HUMAN SACRIFICES IN ALASKA.**—One of the great glaciers of Alaska, in pushing forward its terminal moraine, is gradually filling a up valuable fishing stream. In 1876 the native tribe, who claim the stream, sacrificed two slaves to appease the god of the glacier and stop its further encroachments.

## NOTES ON EUROPEAN ARCHÆOLOGY.

BY HENRY PHILLIPS, JR.

DR. BECKER lately explored the mounds near *Aschersleben*, from one of which had been taken a skeleton and a variegated urn, but the general results were unimportant.

MR. E. HANDMANN contributes to the *Zeitschrift für Ethnologie* (1887, II.) a lengthy and valuable paper on the antiquities of the vicinity of *Lenzen* and *Kiebitzberge*, in which he refers to the explorations and finds by various archæologists during the past year.

AT BUTZKE (near Belgard in Pomerania,) the remains of a prehistoric amber work-shop have been exhumed, where amongst over one hundred Roman clay, glass and enamel pearls, more than eight hundred amber beads were found, as well as a bronze fibula and a golden wire, and two *denarii*, one of Vespasian one of Faustina. Remnants of the crude material were also discovered at the place.

TUMULI IN BULGARIA.—Dr. F. Kautz has been exploring the tumuli in the vicinity of *Sofia* and *Kazan-lık*; the contents were skeletons and prehistoric remains, as well as traces of incineration.

BRONZE KNIFE WITH A FISH'S HEAD.—In the museum at *Kiel* is a bronze knife terminating in a fish's head and with spiral ornaments on the flat of the blade which is considered to represent the profile of an early war-galley with high-rising stem, and the stern somewhat lower.

TREPPANNING IN BOHEMIA.—In the Museum at Prag are two well preserved skulls found at Bilin which had been clearly subjected while living to the operation of trepanning, and whose owners lived a long while thereafter.

A TREPANNED SKULL was found near Zschorna among urns, beads paleolithic flints, rings, perforated foxes' teeth, needles, etc.

DR. VIRCHOW contributes to the *Anthrop. Zeitschrip*, (1884, IV.) a lengthy and valuable article on the prehistoric relations between Italy and Germany.

NEAR KAZMIERZ, in Posen, six prehistoric graves were opened in which were found objects of bronze, glass and clay, celts, urns, bead-pearls, amber necklaces, etc., etc., etc.

EXPLORATIONS near Rudelsdorf have resulted in the discovery of many objects of clay, including some good sized urns.

NEAR RATIBOR were found the vestiges of wooden piles, together with clay vessels and animal and vegetable remains, supposed to be the result of an offering to the *manes* of some deceased ancestors of prehistoric dwellers in Poland.

THE NATIONAL ASSEMBLY of German Historical and Archæological Societies has taken steps to obtain from the government, following the lead of other enlightened European States, a law to prevent the destruction of national monuments whether on public or private property.

IN MARCH 1885, a quantity of Roman and pre-Roman remains were found at Breca, near Misoco, near the Bernardinerberg, among which were bronze pins for clothing, bracelets, one round iron ring 4 centim. in diameter, a lance point, an iron dirk-knife, a small grayish brown drinking vessel, a clay urn, and some bronze coins of Hadrian, and a fragment of unburned bone.—[*Antiqua*, 5 of 1885.

NEAR VADENA (Italy) is an old buryingplace, supposed to relate back to about 390 B. C., whose contents have been explored and are evidently Old Italic, followed by inscriptions of an Etruscan period. Bronze and iron fibulæ of the *La Tene* type were also found among matter of a much later period. Paolo Orsi of Rovereto has published the results of these investigations in an illustrated volume.

THE HOLZEN CAVES, in the duchy of Brunswick, are of artificial construction; in them were found bones of the lesser mammals including the Lemming, and are supposed to have been the scenes of cannibalism, in prehistoric times. Mr. Nehring, who explored them, gives the following reasons for this belief:

1. Human remains are mixed promiscuously with the ashes and coal with no symptom of a regular burial.

2. The bones show no signs of calcining, which if the body been cremated must have been the case.

3. They are also split open lengthwise as if to extract the marrow.

The Holzen caves are only one spot among several that have clearly designated vestiges of cannibalism in Germany.—[*Zeit. fur Ethn.*, 1884, II.

THE FIRST prehistoric finds in *Servia* date from 1875, when a fine stone axe-hammer 53 mm. long by 44 mm. wide was discovered at *Medvedj*, near Nisa; in 1878 a second was unearthened 158 mm. long and of basalt. Since then various discoveries of stone implements, etc., have taken place especially in some cases near *Islasnica* associated with human bones and the remains of the *spelæus ursus*.

Some tumuli exist near Nisa, and are especially large in the vicinity of *Caribrod*, whose contents may, it is to be hoped, some day be subjected to a scientific exploration.

FOLK LORE.—An epidemic of small-pox prevailed in *Tiflis* from December 1883 to April 1884. The disease was named by the inhabitants "the good angel" (*Khwahwilli*) and the patient was placed in a darkened room decorated with his finest tapestry and best clothing as a means of propitiating the "house spirit" which was supposed to be visiting the afflicted one. Nothing warm or light was permitted in the sick chamber for fear of angering the spirit. The neighbors, all decked in their gala attire, pay friendly visits of lengthy duration to the sick person and even kiss the pustules. The superstition is that the visitation of the angel must be received with rejoicing and cheerfulness. This treatment continues until the patient recovers or dies, in which latter case the *Khwahwilli* has gone unappeased to some other house.—(*North. Zeit.*, 1884. IV. 292.

NEAR NEUKIRCHEN (Cassel) stands a tree used as a sympathetic means of cure to which a piece of human flesh is nailed. This is supposed to be a sure cure for cramps, and the patient operated on must never approach the neigh-

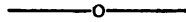


borhood of the tree. If a piece of the bark is in silence turned in an aching tooth till the blood comes, the pains will cease.

SRECA.—Glück und Schicksal im Volksglauben des Südslaven, von Dr. F. S. Krauss.

DAS BAUOFFER dei den Südslaven, von Dr. F. S. Krauss.

Both characterized by the care and fullness always found in Dr. Krauss' work. Fortune good and bad, times, days, etc., are the subjects of the first treatise whilst the second deals with the sacrifice customary on breaking ground for a building. In the latter reference is made to a French statement as to the existence of human sacrifice in Bosnia as late as 1863, but only to discredit it.



### NOTES FROM THE FAR EAST.

BY PROF. JOHN AVERY.

At the meeting of the last Oriental Congress, at Vienna, Mr. M. Macauliffe, of the Bengal Civil Service, presented a lithographed copy of the *Life of Bābā Nānak*, founder of the Sikh religion, which he had recently edited. The life of the reformer given by Dr. Trumpp was from a defective MS. found by him in the British Museum. The present work is based on a more recently discovered MS., which is itself incomplete; but fortunately its deficiencies can be supplied from the first MS., and we probably have as the result, the oldest, and for the most part an authentic life of the religion of the Panjāb. As evidence of this, may be remarked its freedom, in the main, from the gross exaggerations which characterize the current lives of Bābā Nānak.

On the same occasion Mr. G. A. Grierson read an elaborate paper on the mediæval vernacular literature of Hindustan, of which we hope to speak more particularly, when the paper shall have been printed. The most striking feature of the literature produced in the Hindi language during the last three hundred years is its enormous mass. With here and there a work rising above the general level, it is extremely trashy in quality. Not only is the language largely modernized Sanskrit, but the subject-matter and treatment are, in great part, an imitation of the puerility and grossness of the Purāṇas. In contrast to this servility toward the past, there has recently appeared a craze to adopt in a crude and wholesale manner the sentiment and style of European writers, which is in like degree unfavorable to the growth of a strong and original vernacular literature.

Quite similar to this is the history of literary culture in Bengal. During the Moghul dominion, Islam exerted a strong repressive influence on, if it did not directly forbid, the literary use of the vernacular. In the revenue courts, so it is said, a petition could not secure attention, if written in Bengali; and it was not until after 1839 that Government ordered the substitution of Bengali for Persian, as the language of official documents in the Lower Provinces. It is not surprising under these circumstances a genuine native literature was late in starting, and we are told that prior to 1778 only forty works had been composed in Bengali. That year is memorable as the date when types were first

used in Bengal. They were prepared and used by Sir Charles Wilkins for printing Halhed's Bengali grammar. He afterwards taught the art of cutting them to a native blacksmith.

The impulse to literary activity was at first due to foreigners. In the year 1801 Cary's translation of the New Testament was printed, also a life of Pratapaditya the great king of Sagur, a ruined city of Lower Bengal. The style of the latter work is half Persian and half Bengali. The founding of the college of Fort William in 1800 gave a great impetus to the literary use of Bengali, and for the next few years numerous works were published under its patronage.

Much was done for the language by the Calcutta Bible Society, which was organized in 1811. By the year 1849 it had issued in Bengali 602,266 copies of a part or the whole of the Scriptures. This tended to elevate the vernacular from the condition of a vulgar and irregular *patois* into an elegant and fixed language. The Calcutta Book Society, too, which was established in 1817 chiefly through the influence of Lady Hastings, to provide suitable text-books for popular instruction, contributed to the same end. A year later the first Bengali newspaper called the *Darpan* or "Mirror" was started. It was warmly supported by the Marquis of Hastings, and during its existence did much to enlighten the people about the great world outside their simple villages. In 1821 the great reformer Rammohun Roy started a periodical, which he called the *Brahmanical Magazine*. It was devoted chiefly to opposing to the Christian missionaries, and was short-lived. From that time to the present the press of Bengal has groaned under a mass of periodical and book literature, and in this respect it has outstripped every other province in India. Much of this is ephemeral and unworthy the name of literature; but the spread of education is gradually elevating the taste of readers, and so improving the quality of that upon which they feed. From the last Report on the Moral and Material Progress of India we learn that in the year 1884-85 there were published in Bengal 68 vernacular newspapers, of which seven were dailies. Only one of these had circulation of over 1,000. Of 50 weeklies the great majority do not issue over 500 copies each. The number of new books for that year was 2,390, and the subjects treated were, in order of frequency, religion, language, fiction, and history.

Since the term "High Asia," which was first employed by the brothers Schlagintweit, in describing their journey of explorations during the years 1854-58, has been often repeated by writers on the East, it may serve to prevent confusion if we define what is included under the name. It refers to that part of Asia which is bounded on the south by the Himalaya and on the north by the Kün-lün mountains. These ranges sharply define High Asia from India, on the one side, and Turkestan on the other—the most sudden descent being toward the south. The line of the Himalaya is broken by about twenty-one passes, which have an average height of 17,800 feet. Such "passes," reaching a mean elevation greater than Mount Blanc, present a barrier to communication hardly less formidable than the peaks they divide. The passes in the northern wall are, so far as known, less numerous and of slightly inferior elevation. The eastern and western boundaries of High Asia are not so definitely marked. The eastern may be set at 96° east longitude, where the border ranges join on the Chinese system, and the Brahmaputra river makes its great southern bend; the western may be placed at about 71°, where the

Himālaya system passes into the Hindu Kush. A third range of great altitude, called by some the Northern Himālaya, traverses the whole length of this region in a direction nearly parallel to the border ranges. The western portion is known as the Karakorum and the eastern as the Gangri, "Snow-mountain." Between this and the double range of the Himālaya proper is the depression which forms the basin of the Tsampo or Upper Brahmapūtra, and is politically known as Central or Great Tibet. In this valley is settled the pure Tibetan race, and here the language is claimed to be spoken in its greatest perfection; but in pronunciation, at least, it has departed most widely from early standards. Though Tibet is called a valley, it is higher than most mountains, the capital city being 11,700 feet above sea level, and sites of several mountains exceeded 14,000 feet. Between the Karakorum or Gangri and the Kūn-lūm ranges is a shallower but broader depression, known on the maps as Chinese Tibet. A peculiarity of its surface is that its waters are drained into a series of interior lakes. It has been crossed by only a few explorers. It is sparsely settled in the west by Turki and in the east by Mongolian tribes. The former are called Hor and the latter Sak. The whole space included within High Asia is embraced by 25° of longitude and 44° of latitude on the average, or about 350,000 square miles, which is nearly four-teen times the surface covered by the Alpine range.

Sir Walter Elliot, whose death has since occurred, calls attention in the Indian Antiquary to the recent publication of one of the most ancient works of Tamil literature. It is a grammatical work called *Tolkappiyam*, written by a reputed disciple of the famous Brahmanic Missionary Agastyn. Mr. Elliot thinks that the composition may even antedate the period of religious propagandism from Northern India. The light that it throws on the early manners and customs of the Dekhan gives it importance. Among other things it treats of irregular marriages and cattle fights. The former is thought to refer to the winning of by brides capture, an early practice which seems to have existed in many other quarters of the world. So, cattle-lifting appears to have been a constant source of trouble between villages, at a time when the will of the stronger was the only recognized law. This is confirmed by certain carved stone monuments, called *virgals*, which are often seen erected in the vicinity of villages on the border of the Southern Maratha country and Northern Mysore. They commemorate the death of some local hero who, in many cases, fell in connection with a cattle raid.

Speaking of the early literature of Southern India, it has no great age, if we compare it with that of Hindustan. The impulse to literary activity was communicated to the Dravidiens, as it was to the Romans, from a people of superior civilization; and its first efforts were confined to a reproduction or close imitation of the models furnished.

The date of the earliest literature in a Dravidian language—even of much of that now extant and highly prized—cannot be fixed with certainty. The "historic sense" seems to have been wanting in the people of Southern no less than of Northern India. The Tamils, the best endowed of all the Dravidian peoples, were the first to create an independent literature, which is believed by competent scholars to date from the eighth or ninth century. Not only is it characterized by greater freedom from Brahminic influence than that produced elsewhere on the peninsula, but not a little of Tamil poetry has much elevation

of sentiment and artistic beauty of expression. Literary effort seems to have been more tardy in the other Dravidian languages. The oldest works in Telugu and Canarese are thought to belong to about the twelfth century, while Malayālan literature is but two or three centuries old. It appears, then, that literary activity in the Dravidian languages of the Dekhan has been very nearly synchronous with that in the vernaculars of Northern India and the modern languages of Europe.

About three years since the Rev. E. Droese of Bhagalpur, India, published an outline grammar and vocabulary of the Malto language, which appears to be an outlying member of the Dravidian family, in both a geographical and a linguistic sense. It is the speech of an aboriginal tribe, numbering about 68,000, which calls itself *Maler* 'men,' but is known to the Aryans of the plains as *Paharias*, "Hill people." Their location is on the so-called *Rajmahal Hills*, which overlook the Ganges in Lower Bengal. The following are some of the characteristic features of the language. Like the Tamil, and for the most part the other Dravidian languages, it has no aspirated mutes, except *th*; but unlike the Tamil it retains the unaspirated sonant and the dental sibilant. As a rule, gender is ascribed only to rational beings. Man and the most dreaded deities are masculine; while woman, the inferior deities, and the Supreme Being are feminine. To some extent suffixes are used to denote gender: The tendency in the Dravidian, as well as in the Tibeto-Burman, languages to restrict gender to the higher order of beings shows the absence of that poetic imagination which led the Greek to personify everything Nature. The relations of case in nouns are expressed by suffixes, which are same for the plural as the singular. Usually case-endings cause no change in the root-word; but sometimes root-vowels are dropped or helping-vowels inserted, as is so common in the inflecting languages. Adjectives are not declined, except when used as nouns. Comparison is effected, not by changing the adjective, but by placing the object with which the comparison is made in the ablative case. For the superlative it is only necessary to prefix to this the word meaning "all." Only the first two numerals of Malto are original, and these are strikingly Dravidian; the rest are borrowed from Aryan speech. The language has distinct forms for the first and second personal pronouns only, using for the third a demonstrative pronoun. The first person plural has a two-fold form, one denoting the party of the speaker alone, and the other including the party addressed. There are traces of this usage in the Aryan speech of Northern India, and it is characteristic of nearly all the Dravidian languages. It occurs in Garo and in some of the Himalayan dialects. The possessive pronouns are formed by taking the genitive of the personal or demonstrative pronouns as a base and adding to this the ordinary suffixes of declension, for the different cases. The language has no relative pronoun, and therefore no relative clauses; equivalent expressions are formed in variety of ways, among which participles and adjectives formed with a suffix signifying "belonging to" or "possessed of" are of most frequent occurrence. Far greater use is made of co-ordinate, instead of dependent clauses than is common with us. The Malto verb has an indicative, conjunctive, optative, imperative, and infinitive; a present, past, and future tense; and an active and passive voice, the latter being also used reflexively. It also has a negative form for each mode, tense, and voice. It has a variety of participles which, with the several forms of the infinitive are an important element of the sentence. In inflection it distinguishes not

only the number, but the person, and even—in the 2nd and 3rd person—the gender of the subject; moreover it has an “exclusive” and “inclusive” form for the first person plural. There is observable in some verbs a tendency to differentiate tenses by making a change of inflective base. A verb may be formed from an 7 part of speech by simply appending the verbal endings; even the negative adverb may posture as a verb. So readily is this done that the verb “to be” has no form for the present tense, when used as a copula, but the predicate noun or adjective takes the verbal endings instead. Derivative verbs are formed by various particles inserted between the root and the personal endings. Verbs are readily compounded with verbs and other parts of speech, by which the principal idea is variously modified. The language employs postpositions instead of prepositions; but these are in all cases oblique forms of nouns, and the words governed by them, as we should say, are merely nouns dependent on other nouns.

Viewing the the structure of the Malto as a whole, one would place it confidently in the agglutinative class, while there are not a few points in which it approaches near to true inflection. The language, though favored by the comparative isolation of its speakers has suffered much from proximity to Aryan tongues. This is mainly, of course, in its vocabulary; but in part also by the introduction of idioms from foreign languages of another type, which at best are unnecessary, and which sometimes do violence to the genius of the Malto.

---

#### BOOK REVIEWS.

*Review of the Materic National Bank Manual.* Boston; 1887.

The point of interest which this book has for the readers of the ANTIQUARIAN aside from the statistical information contained in it, consists in the fact that every chapter in it begins with a history to illustrate it, as follows: Early Government Loans, Early History of Water Supply, Early Banking, Primitive Coins, the Development of the Locomotive, Early Steam Vessels, Discovery of Coal, History of Telegraphs, all of antiquarian interest. The book contains an immense amount of information. It is sent out by S. R. Niles, Newspaper Advertising Agency, 236 Washington street, Boston. It is called a statistical reference book.

*Memorials of a Half-Century,* by DELA HUBBARD. New York and London; G. P. Putnam's Sons, The Knickerbocker Press. 581 pages.

The readers of the AM. ANTIQUARIAN will remember the author of this book as one who furnished the valuable article on Garden Beds of Michigan, published in the first volume quotations from which, and the cuts, were published in the seventh volume. Mr. Hubbard is an old resident of Detroit and is familiar with the early history of Michigan; he is a gentleman of scholarly taste and very considerable wealth and has done much to keep up the interest in scientific and antiquarian studies in the city of Detroit. The book published by the Putnams is a collection of fugitive essays, contains chapters on the early history of Michigan, on the natural history of Michigan, on the trees, birds, four-footed animals and fishes, also an account of a geological expedition with Dr. Houghton in 1837, and a chapter upon the climate of Detroit. Under the head of History there are chapters upon the French habitants, first settlers' homesteads, the naming of Lake St. Clair. In the line of archaeology a chapter upon the Indians in Michigan; two chapters on the Mound-builders of Michigan, and one upon the Ancient Garden-beds. The book is written in a very interesting style, which has been compared to that of Thoreau. It is well illustrated and is attractive in every way.

THE  
*American Antiquarian.*

---

VOL. IX.

NOVEMBER, 1887.

No. 6.

---

EPITOME OF THE HISTORY AND CONDITION OF  
THE SCIENCE OF PREHISTORIC ARCHÆ-  
OLOGY IN WESTERN EUROPE.

FIRST PAPER.

This paper, now swollen to nearer the proportions of a book, is intended as much for popular as for scientific reading. Its object is to acquaint the American people and the American scientists with European work and workers in this new science; to encourage our people, to create increased interest, and to incite them to renewed exertion in the pursuit and knowledge of prehistoric man. If I succeed in any of these, I shall feel repaid for my labor.

To reduce it within the limits of the required space, whole chapters must be omitted, which will account for seeming breaks in its continuity.

In treating of the subject, I shall first review the history of the science, giving the progress of study in the different countries or kingdoms. I shall speak first of the progress made among Scandinavians; next shall refer to the science as it was developed in Belgium, France, Great Britain and Spain.

The title of my paper is *The Progress of Archæology in Western Europe*, but I have included the whole of the continent for the sake of comparison, and have endeavored to give a summary, so that my readers can have a general view of archæology as it has existed and at present exists throughout the European continent.

SCANDINAVIAN COUNTRIES IN THE PREHISTORIC AGES.

Denmark is entitled to stand at the head of nations in honor of her discovery of the existence of man in the prehistoric ages of stone, bronze and iron.

Nyerup and Simonsen discovered the polished stone hatchet,

with which that country abounds, and identified them as the work of prehistoric man. The King of Denmark became interested, and thus was laid the foundation of the great museum of which Copenhagen is so justly proud. This was in the early years of the XIX century, 1806 to 1816. Thompson became then its director and remained so until his death, 1865, a period of fifty years. This museum is the monument of the labor of his life. Worsaae succeeded him as director until 1868.

Worsaae was for forty years the chief of Danish archæologists. He was a man of great learning, and his versatility was such that he could use his learning successfully in almost any direction. He entered politics and was appointed in the King's Cabinet as Minister of Public Instruction in 1874, a position he held until his death in 1885. He was preparing a comprehensive and all-round treatise on prehistoric anthropology when death cut short his work, to the world's great loss. For this work he possessed peculiar qualifications. It was to have been translated into all languages, the English having been assigned to Rasmus Anderson, our Minister to Copenhagen.

Steenstrup completed the trio of celebrated Danish archæologists. He was a professor of Zoology, but from thence to our science is but a step. His personal interest and the national pride pushed him into its study. His opportunities were great. He discovered the *Kjokenmoddings*, and he and Worsaae were appointed a committee to study and examine them. They did so, but differed as to the age to which they belonged. Their discussion was carried into the International Anthropological Congress held at Copenhagen in 1869.

All the foregoing have passed away. They are replaced by Englehardt, Steenhauer, Doctor Sophus Mueller, and Mr. Petersen. These gentlemen all speak English and are very affable in their willingness to show and explain the riches of the museum of which they have charge.

Sweden keeps a good second with Denmark. Hildebrand, Sr., was the pioneer. His son is now Curator of the Royal Museum, with an able assistant in Oscar Montelius, who is now studying and classifying the different ages of bronze. He has been able to make eight subdivisions in its progress of civilization. Doctor Soderborg, of the university of Lund, is devoting himself to the Runic philology, and in tracing it back into the prehistoric. The International Anthropological Congress held its session of 1874 in Stockholm.

In Norway, Professors Undedt and Rygh, of Christiana, have done excellent work in gathering the prehistoric remains of their country. These are all assembled and classified in the Royal Museum at the University. The state takes possession of all articles—none are sold or exchanged. The Runic literature of their country is unique, and being nearly prehistoric affords a fine field for the antiquarian philologist.

Professor Rygh is an elderly man, very learned; speaks English well; but has published nearly nothing of his researches. Mr. Undedt, on the contrary, is quite young, has traveled much and gives to the world the benefit of his discoveries. I found one of the best brochures on Etruria to have been written by him in Italian, during a visit to Rome, and published in the *Annale del Istituto*.

PALEOLITHIC AGE.

The prehistoric man of the paleolithic age, including the cavh period, did not inhabit any of the Scandinavian countries. No traces of his occupation, such as the Chelleen implements, the Moustier points or the Madeline engravings have ever been found. It has been suggested, in order to account for this, that Scandinavia was, during the quarternary geologic period, covered possibly by glaciers, possibly by the great polar sea which covered Russia.

The prehistoric ages of polished stone, bronze and iron endured for a long period of time, and came to high perfection in these countries. The prehistoric continued here until a later date than in any other European country. The prehistoric epochs of these countries, as fixed by their savants and illustrated in their museums, are stated thus:

Age of polished stone—First epoch, 4,000 or 3,000 to 2,000 years B. C. Second epoch, 2,000 to 1,000 years B. C.

Age of Bronze—1,000 to 100 years B. C.

Age of Iron—First grand epoch, 100 B. C. to 600 A. D. Second grand epoch, 600 A. D. to 800 A. D. Third grand epoch, 800 A. D. to 1000 A. D.—the latter being the epoch of the Vikings, at the end of which begins the historic period.

The early Runes date to the first grand epoch of the iron age—the later continuing into the historic period.

History passed by Scandinavia, while it marched with flaming banners, escorted by Roman armies, through Germany, France and England. It is a boast of the Norsemen that no Roman soldier ever set his foot on Scandinavian soil. While Rome declared herself mistress of the world, she was compelled to except Scandinavia. It is curious to consider how Rome was the first time sacked by the Gauls 400 years B. C.; that she was the next time sacked by the Normans 1400 years later, and it is still more curious to consider how Rome overcame and occupied France and England during five centuries, while Scandinavia, to near a neighbor and now visited yearly by thousands of pleasure seekers, should have remained almost *terra incognita*. In fact during the next five centuries but little was known in history of the Scandinavians, except through their invasions into historical countries.

There is, however, much evidence of commerce with Rome during the iron age. Many pieces of bronze have been found



of Roman manufacture; 4,715 pieces of Roman money have been catalogued as having been found in Scandinavia, 554 in Denmark, 1 in Norway, 12 in all Sweden except Scanic, 584 in Seanic and 3,564 in the islands of the Baltic. No communication known with Britain or France.

#### THE NEOLITHIC OR POLISHED STONE AGE.

This has been divided into two epochs or classes. The first or earliest is that of the *Kjokenmoddings*. It was over this question that Worsæ and Steenstrup had their discussion. It is not of great importance to us, for it was admitted on all hands that both periods belonged to the age of polished stone.

It may be interesting to give a list of the objects to be seen in a section of a veritable *Kjokenmodding*, that of Mejlgaard, transported *en bloc*, and exhibited at the Copenhagen Museum, as follows: 1, Hatchets of flint, chipped, not polished, of small size, triangular in form, and of the type known by that name. 2, Hatchets of deer horn. 3, Pieces of deer horn, cut and sawed. 4, Combs for carding flax. 5, Pins and poignards made of bone. 6, Blades of flint, knives and saws. 7, Nuclei and nodules of flint, some with blades detached, others ready for it. 8, Fragments of ordinary pottery. 9, Stones cracked by fire. 10, Long bones of animals, split. 11, Bones of birds and fishes. 12, Shells of oysters, mussels and snails.

The implement peculiar to the *Kjokenmoddings* and known as a special type is the hatchet. It resembles our modern hewing axe more than it does any other. One side—the face—is straight and true; the opposite side has all the bevel which brings it to its edge. There is a second form, but it seems later or more nearly related to the common polished stone hatchet.

The people during this epoch were nomadic, lived by the chase and by fishing, and had neither agriculture nor flocks or herds.

We visited the renowned *Kjokenmodden* of Havelse—the same to which the International Anthropological Congress made an excursion during its meeting at Copenhagen in 1869. It is, say, two hours by rail to Fredericksund and one hour by carriage. We found it to be a large, low mound, with a wind-mill on the top. It was not so steep as to prevent cultivation, and we found it put to that use. It was less than a mile distant from the sea coast. We obtained permission, and dug about for an hour, finding skulls and flint chips, all of which are at the Smithsonian Institution.

The second epoch of the polished stone age of the Scandinavian countries is marked by the beautiful flint implements, sometimes polished, sometimes only chipped, which have become at once the pride and pleasure of those countries and the good-natured envy of others. They are found sometimes in the sepulchres and sometimes, together or isolated, on the surface.

I procured some specimens, now with my collection in the Smithsonian Institution, which are remarkable for their size and beauty.

In this epoch the people had some knowledge of agriculture and possessed flocks and herds.

Dolmens are found in great numbers all over Denmark. Many are found also in Sweden but they are principally in the southwest part. In Norway none or but very few have ever been found.

The human occupation of Scandinavia must have been comparatively dense during the age of polished stone. This occupation extended over Denmark entire, over the southern part of Sweden and southern Norway. I do not know the number of objects which have been found in Denmark or in Norway, but an idea may be obtained from a glance at the geography of Sweden.

All of Sweden north of a line drawn through Dalelf had furnished down to 1874 less than two hundred objects of polished stone. The southern half of Sweden, except Scanic (the southernmost province), had furnished 11,000 objects, while Scanic itself had furnished no less than 35,500.

#### AGE OF BRONZE.

The Scandinavian countries are very rich in metal implements and ornaments belonging to the age of bronze. The copper and tin of which the bronze is composed are not found separately in the country. The bronze ready made was imported from foreign countries, supposed to be from Italy, Hungary and the region about the Black Sea. Many articles of their manufacture have been found in Scandinavia. The bronze was an article of commerce traveling from the South (East) to the North (West), while the counter object of trade seems to have been the yellow amber of the Baltic. The highways of trade seem to have been the rivers Elbe, Oder and Vistula—the two latter more than the former.

These conclusions, stated thus synthetically, are not mere theories, but have been wrought out step by step, with a detail the most careful and satisfactory.

Bronze was wrought within the country, as is shown by the many workshops and by the moulds and tables found, as also by the quantity of articles of every sort found all over the country belonging to the home patterns. Case No. 113 of the Copenhagen Museum is full of these moulds and the tools necessary to manufacture the various objects.

One is a bronze vase with its core still inside. The moulds are sometimes of clay, of stone or bronze, and are for hatchets, saws, knives, rings, pins, sickles, etc., etc. There are to be seen ingots of bronze, stubs from the mouth of the mould, implements half finished, and things more rare, the hammers, anvils and

punches with which the articles rough cast were to be finished and decorated. Of the foundries or workshops, they found in one, 163 pieces or implements; in another a great number of nails with fancy heads, portions of a small wagon and many broken objects, weighing altogether fifteen and a half pounds, and deposited in a large vase of earthenware; in another a series of sickles cast but not finished; in another, fragments of swords. The Museum at Copenhagen possesses 600 swords and poignards with perfect blade, and 200 more with broken blades. The Museum at Stockholm had just received a sword-blade complete, intact and uninjured, found in the river-bed, standing point upwards—I think the most beautiful blade I ever saw. I write from recollection, but I think it was  $3\frac{1}{2}$  feet in length, 3 inches in width, lanceolate in form, and finely chased and decorated.

As I have remarked, Doctor Montelius has been able to trace and classify eight subdivisions, changes or eras of progress during the bronze age in Scandinavia. I will not follow him in these subdivisions. They are not merely theoretical. He proceeds in a thoroughly practical manner. The articles found in a sepulchre, whether mound cist or dolmen, are kept sacredly together. By comparison of these, one with the other, first of the burial, its manner, whether by inhumation or incineration, of the position of the body, &c., &c., second, of the articles found therein, and extending this comparison to include all discoveries made in the country, and then to adjoining countries, he has been able to divide them into epochs. For instance, there are many forms and decorations of bronze hatchets, of bronze swords and poignards, of bronze vases and of fibulæ. These can be assorted and divided. Now if each style be always found together, one may fairly conclude they were originally separated from the other styles. Doctor Montelius has claimed that the articles of each of these periods are found associated pure and simple in about 90 per cent. of the instances, that the mixture of the period immediately adjoining, as say first and second or second and third, occurs in about 10 per cent., while those with an intermediate period, as first and third or second and fourth, or third and fifth, never occur. And he has concluded that each of his subdivisions may have continued for a century or perhaps a century and a half.

#### THE AGE OF IRON.

We can only glance at this, although it is very important. It commenced about 100 B. C. and continued as prehistoric until the historic period about 1000 A. D. As it approaches modern and historic times it is the more easily traced, and they have been able to divide it into three periods, which are in turn again subdivided. Its relative importance may be seen by the space occupied by each age in the Copenhagen Museum : Kjoekmod-

ding polished stone, 3 halls and 63 cases. Bronze, 2 halls and 51 cases. Iron, 5 halls and 73 cases.

It was in the first age of iron that the ancient runic alphabet appeared. Its earliest known example has been assigned to the third century. I believe no continuous writing or history in this language has ever been found, but what has been found in inscriptions is of great importance, the more so as, unlike the Etruscan, the key is possessed. The language resembled that of the Goths of the Danube. They conclude it to have been made by the Germans or Goths after they had acquired a knowledge of Greek and Latin.

There was a second and more modern runic language, which is not to be confounded with the earlier. It was in use from the VIII. to the XII. century.

#### MUSEUMS.

My subject has run away with me, but I must not overlook the museums.

The policy of these countries has been to congregate the prehistoric objects in a single place and consolidate them into one grand museum. This policy, coupled with the long existence of the museums, the zeal and intelligence of their founders and the riches of the prehistoric man in his beautiful objects, whether of stone, or bronze, or gold, combine to render the Scandinavian museums the finest of the world. Take that of Copenhagen for an example: Think of the eight large halls occupying the entire first floor of the Grand Prince's Palace—containing 187 cases—of 11 workshops in addition to the Kjøken-moddings of the stone age, one alone of which furnished the following as principal objects: 300 hatchets, 58 percoirs, 4000 grattoirs, blades, knives and saws, 1426 arrow heads with broad cutting points—*trenchant transversal*, among many others of different kinds. Think of 10,000 polished stone hatchets of the large and beautiful type Scandinavian—of side walls entirely covered with spear heads of all dimensions—with the splendidly chipped poignards—with drilled axes and hammers—of bronze implements and ornaments filling 51 cases—of trumpets—of gold objects so extensive and valuable that not only are they kept during the day under lock and key, with a guard in every room, but at night are all taken out in their trays and stored in an immense steel safe—think, I say, of all these things, and you will admit my first sentence: that Denmark stands at the head.

The arrangement or classification in these museums is much the same in the three countries. Theirs is the ideal arrangement or classification of modern museums. First, chronologically; second, geographically; and, third, by industries. Each age is together and by itself—stone, bronze, iron, and, so far as possible, each epoch or subdivision of these ages. This is the

chronologic arrangement : Each *find*, whether of sepulture, or workshop, or deposit, whether Kjokenmodding, Dolmen, Cist, in whatever form, is arranged by itself, but in its proper age. This is the geographical arrangement : All isolated objects, not classified as above, are arranged according to their respective industries, *i. e.*, the stone hatchets together, the spear-heads together, knives and poignards, drilled axes and hammers, saws, scrapers, etc., etc., all in the same manner.

In the late epochs, the historic, the objects, labelled with the place where found or from whence they came, are classified according to their respective industries, or following the modern nomenclature, according to their structural function. Thus all objects which served religious purposes are placed together, weapons together, and so on with other objects.

These last are the classifications of the ethnographic section of the National Museum under the direction of Professor Mason.

If any one is inclined to lightly criticise the foregoing classifications, I ask him to pause and consider: how these are among the oldest prehistoric museums in the world, that their founders were the discoverers of prehistoric man, how they were engaged in this work before any now living anthropologist was born, that they spent their entire lives in the study of the science and knew their country foot by foot and its prehistoric treasures one by one, that they were teachers, masters of their science, whose learning and ability were recognized and admitted by every anthropologist on their continent. I may illustrate these attentions in detail. A doubt having been expressed as to the efficacy and utility of the implements of the stone age, one of the Swedish anthropologists took from his collection a series, and handling them after the prehistoric manner, he and his son felled the trees, split and hewed the timber, and built complete a house, which they occupied as a shooting lodge.

The prehistoric objects are costly. The museums have always the first choice, the public only get the second; but whether first or second—museum or in commerce—the articles are recognized as highly valuable, are much sought for, and can only be purchased for cash in hand. And these things are truer than Americans are generally willing to believe.

Washington, D. C.

THOMAS WILSON.

## ABORIGINAL COMMUNAL LIFE IN AMERICA.

It is no grateful task to criticise the statements or theories of a writer who did so much valuable work as the late L. H. Morgan, but I long ago learned that these were far from conclusive. His "League of the Iroquois" is all that could be desired as a statement of the present life and customs of that interesting people, but when we go back of the present century, there is very little in it that will stand the test of even moderate criticism. His map of the Iroquois country is that of modern days, not of the old villages and trails, of which he knew next to nothing. He abandoned the old traditions, long on record, for the extravagant statements of Cusick, the Tuscarora historian. I have before shown (Permanency of Iroquois Clans and Sachemships,) how faulty his views were on the early divisions and government of the nations, and his habit of accepting evidence, on what he thought good grounds, without weighing it, is everywhere plain.

More care was exercised in preparing his last great work, but it is open to the same criticism, and some serious objections may now be considered. His theory is that all aboriginal life in America was communal, and that the houses were built with especial reference to this. These views are embodied in his large work, and in a paper in Johnson's Universal Encyclopædia.

In reviewing his errors regarding the Iroquois clans, to some of which he denies the power of having a sachem, we may remark that, in contradiction to his own statements he claims that each gens had the right of electing and deposing its sachems and chiefs. The early traditions of the origin of the Five Nations are ignored, and a later one substituted, opposed to these and to archæological proof. These I pass over, only referring to one statement bearing on communal life: "When the confederacy was formed about A. D. 1400—1450, the conditions previously named existed." On this he makes a note: "The Iroquois claimed that it had existed from one hundred and fifty to two hundred years when they first saw Europeans." On the contrary, every early tradition places it in the sixteenth century.

Coming to the main question of communism, he lays down five heads: "The law of hospitality; communism in living; the ownership of lands in common; the practice of having but one meal prepared each day—a dinner; their separation at meals, the men eating first and by themselves, the women and children afterwards." The law of hospitality comes first.

That Indians were hospitable is well known, but there are plain reasons for this. Perishable articles must be eaten at once, but they did not object to storing their grain and getting high

*imperfect*  
*copy*

prices for it in times of scarcity, as history will show. This statement is partly true: "Hunger and destitution could not exist in one end of an Indian village, or in one section of an encampment, while plenty prevailed elsewhere in the same village or encampment." Neither would it with us in a village of the same size, if the necessity were known. He cites the call of John Bartram, on a Delaware family at Shamokin, in 1743, who got him something to eat, but any pioneer would do that for a stranger, and most persons do that for friends who come in from long travel. To mention a feast to ambassadors at Onondaga, in the same way, seems unnecessary. Catlin's account of what happened when the Mandans thought they saw buffaloes, may be noticed in speaking of this community of food, equivalent to the so-called law of hospitality. Mr. Morgan considered the Mandans as communal in life. When the seeming buffaloes appeared there was great rejoicing: "Where hunger had reigned and starvation was almost ready to look them in the face, all was instantly turned to joy and gladness. The chiefs and doctors, who had been for some time dealing out minimum rations to the community from the public crib, now spread before their subjects the contents of their private caches." There can be little doubt that some were always well provided with food, even the public crib was for emergencies. In general each household cared for itself. When we consider the perishable nature of some kinds of food, the impossibility of storing large quantities of other kinds, the lack of markets, natural feelings of compassion and mutual interests, there seems no necessity for saying of the law of hospitality, "The explanation must be sought in the ownership of lands in common, the distribution of their products to households consisting of a number of families, and the practice of communism in living in the household. Common stores for large households, and possibly for the village, with which to maintain village hospitality, are necessary to explain the custom." But Mr. Morgan answers his own argument in allowing "individual ownership of these products, and of their provisions by different families." The following statement hardly agrees with the one given before: "The villages did not make a common stock of their provisions, and thus offer a bounty to imprudence. It was confined to the household. But the principle of hospitality came in to relieve the consequences of destitution." This is mainly true, but it destroys his own argument.

On the ownership of lands Mr. Morgan is compelled to admit a virtual right by occupancy and cultivation. Sir William Johnson testified explicitly to family, tribal, and national ownership, and the references to individual fields are many in early writers. In Morse's report the same thing is mentioned. Catlin is very definite on this point. Rain had not fallen, and the Mandan women "all of whom had fields of corn, were groaning

and crying to their lords, and imploring them to intercede for rain, that their little respective patches might not be withered."

The single meal, theoretically at noon, is a trivial matter. Abundant evidence is provided of two meals, and it is well known that the Iroquois made feasts at all hours of the day, but mostly in the evening. As to the separation of the sexes at meals, this is now a common usage of the Iroquois at public feasts, but it is different in families. Carver made the same observation in the West long ago: "The men and women feast apart; and each sex invites by turns their companions to partake with them of the food they happen to have; but in their domestic way of living the men and women eat together." This reasonable statement Mr. Morgan did not quote.

The important part of the subject is that of the long or large houses, and their adaptation to communal life. As on the preceding questions, I am compelled to leave out much that bears on this subject, for want of space, but some of the more prominent facts will be given.

What Mr. Morgan meant by communism in living is of importance. He says: "Wherever the gentile organization prevailed, several families, related by kin, united as a rule in a common household, and made a common stock of the provisions acquired by fishing and hunting, and by cultivation of maize and plants. They made joint tenement houses, large enough to accommodate several families, so that, instead of a single family in the exclusive occupancy of a single house, large households, as a rule, existed in all parts of America in the aboriginal period." Elsewhere he makes a distinction: "The single families of civilized society live from common stores, yet it is not communism; but where several families coalesce in one common household and make a common stock of their provisions, and this is found to be a general rule in entire tribes, it is a form of communism important to be noticed."

Large families were once common in the United States, and three to four generations in one house are hardly rare yet, and this is really the form of common life which the Indians had. Where, for convenience, more come under the same roof, the life was like that of our tenement houses, each family having its own space.

In his "Fossil Men," Dawson has brought forward the houses of Hochelaga as showing communal life, and it may be admitted in a restricted sense, though there was little time for observations by the French. The estimated population would give twenty persons to a lodge, but the data are insufficient, and it is to be observed that the plan given of the Hochelagan house differs greatly from the description. In Cartier's narrative it is said, "They live in common together: then do the husbands, wives and children each one retire to their chambers." He could not have observed their ordinary life.



It must be allowed that there were long houses. They often occurred in forts, where space had to be economized; they were met with, standing alone, for the house often became a fortress, and large numbers of inmates and freedom of communication became important, as with us. They were often much larger than the immediate wants of the family, because strangers might double the household at any moment. They were often used for storage, as mentioned in Lewis and Clarke's travels, where half the house was reserved for this. But allowing for all this, their number and the size of the households have been greatly exaggerated. In spite of Mr. Morgan's disclaimer, it is evident that the larger houses are commonly described, not the smaller. Fortunately we have proof on this point.

Whoever reads the pathetic history of the early Hurons, will be struck with the account of their long houses, and the revels sometimes held in them. An impression has grown up that these houses were the rule. Parkman's comparative statement seems sober and just. In 1639 he estimates that the population was 20,000, composed of 12,000 adults and 4,000 families. There were 700 dwellings in thirty-two villages. Two families used the same fire, and the houses were generally thirty to thirty-five feet long, and thirty feet wide. These certainly were not *long* houses, but some were 240 feet long, and without partitions. The average number of inmates would be thirty persons, divided into five families. It will be allowed that many had not over half that number. His average gives less than three fires to a lodge. That these large houses were sometimes for public use is evident, for in 1615 the Hurons offered LeCaron their great cabin in the fort.

It was natural that Mr. Morgan should say much of Iroquois houses; it is singular that he should have overlooked so much, and so exaggerated facts. Thus he says that the Iroquois lodge "was from fifty to eighty, and sometimes one hundred feet long." "A house with five fires would contain twenty apartments, and accommodate twenty families." Now the longest Iroquois lodge of which we have any account was the council-house at Onondoga, where Bartram lodged in 1743, and the plan of which Morgan gives as though it were an ordinary house. By no word of his own does he hint at its public use. He gives, however, Bartram's words: "The scattered houses on both sides of the water are not above forty in number; many of them hold two families, but all stand singly. . . . We alighted at the council-house, where the chiefs were already assembled to receive us. . . . They showed us where to lay our luggage and repose ourselves during our stay with them, which was in the two end apartments of this large house. . . . This cabin is about eighty feet long and seventeen broad." It seems hardly fair to give this as the ordinary form and size, at a time when only part of the Onondoga houses were large enough for two

families. As for the supposed site of 1615, many miles away from the Onondaga valley, where the nation has lived for a century and a half, I have examined it carefully, and utterly dissent from Mr. Morgan's conclusions. In comparing the site and picture the houses could not have been as large as he claimed, and other instances might be produced. He thought these from sixty to one hundred feet in length. Taking the height of the palisades in the picture as the proper unit of measurement, they might have been from twenty to thirty feet long.

Houses belonged to individuals, and the chiefs and wealthy men had the largest. When Le-Moyne visited Onondaga in 1654, the first chief of the country lodged him in his cabin, and called the principal men together. Subsequent missionaries were lodged in a cabin with four fires, one of which the two Frenchmen had for their own use. During a following war, the Onondaga chief Garakontie assembled twenty-four Frenchmen with the Huron captives, and gave them feasts on Sundays, sometimes in one cabin, sometimes in another. To do this we did not displace large heathen households. The same chief, in 1660, led Le-Moyne first to the lodges of those sachems and chiefs most opposed to peace, and then to his own, which was fitted up as a chapel. In 1669 he invited all to a feast in his cabin which he adorned; and after his baptism, by the conversion of his wife, he rendered his lodge entirely Christian. These things point to personal ownership of ample cabins.

The distinctions of wealth and station were very plain among the Iroquois, and Father Milet relates that the Oneida Christian women refused offers of marriage from the heathen, preferring their helpless state to the plenty of a chieftain's lodge. As late as 1750 a chief's house was the largest among the Onondagas. "His lodge proved to be of unusually large dimensions."

Full use has been made of Greenhalgh's account of Tiohatton, but proper judgment has not been used. "The Seneca-Iroquois village of Tiohatton, two centuries ago, was estimated at a hundred and twenty houses. Taking the number at one hundred, with an average length of fifty feet, and it would give a lineal length of house-room of five thousand feet. It was the largest of the Seneca, and the largest of the Iroquois villages, and contained about two thousand inhabitants." Greenhalgh said that this village "contained about 120 houses, being the largest of all that we saw; the ordinary being 50 or 60 feet long, with 12 to 13 fires in one house." Some mistake in the number of fires is probable, but if we divide 2,000 inhabitants among 120 lodges, we have but an average of less than seventeen inmates in an exceptional case. Applying Morgan's rule, however, of four families to a fire, and allowing but one warrior to a family, this village would have had 4,800 warriors, while the four villages of the Seneca nation had but one thousand.

Greenhalgh's figures may not be accurate, but he gave the Senecas 324 lodges and 1,000 fighting men, but little over three to a house; the Cayugas and Mohawks each 100 lodges and 300 warriors, or three to a house; the Oneidas 100 houses and 200 warriors, or two a cabin; and the Onondagas 164 houses and 350 fighting men, averaging a little over two to a lodge. If a man, therefore, had one or two married sons living with him, it would fit the account, and this is about all there is of the communal Iroquois' long houses. In fact, Mr. Morgan says that the knowledge of these "has passed into the traditional form, and is limited to few particulars"

A strong point is naturally made of the Mandans. A few years ago Mr. Morgan visited a site of the Mandans, apparently that occupied by them at the time of Catlin's residence, nearly fifty years before. If so, the town had changed, a stockade had been erected all around it, and the site had been long occupied by other Indians. In some way he appears to have counted forty-eight lodge sites, which he ascribes to the first inhabitants. Referring to Catlin's visit, he says that "the principal Mandan village, which then contained fifty houses and fifteen hundred people, was surrounded with a palisade." "The number of inhabitants, divided among the number of houses, would give an average of thirty persons to each house." This sounds curiously to a reader of Catlin's narrative. There were two Mandan villages then, the *smaller* containing from sixty to eighty lodges. In the larger there was a single palisade and ditch extending across the bluff, leaving two sides open to the river. In the enclosure, says Catlin, "There are several hundred houses or dwellings about me, and they are purely unique." The population of both towns he states at 2,000. Now if we allow for rhetoric and call the lodges two hundred in both towns, dividing the inhabitants equally among the houses, as Mr. Morgan suggests, we have an average of ten inhabitants to a house. This is much below what seems to be Mr. Catlin's statement of the number of their inmates: "These cabins are so spacious that they hold from twenty to forty persons—a family and all their connections." We have to remember that the aristocratic feelings of the chiefs would not allow the artists who painted them to mix with the common people, and that he visited the best houses, where many gathered to see him. We must look a little farther for the ordinary life even of these. In one he describes the ten or twelve curtained beds, as though each inmate had one. He went to a chief's lodge, which was forty or fifty feet in diameter. "While sitting at this feast the wigwam was as silent as death, although we were not alone in it. This chief, like most others, had a plurality of wives, and all of them (some six or seven) were seated around the sides of the lodge upon robes or mats placed upon the ground, and not allowed to speak." "It is no uncommon thing to find a chief with six, eight, or ten,

and some with twelve or fourteen wives in his lodge." Poor Indians could not afford these.

Mr. Morgan criticises what Wyeth says of his sketch of Pomeiock in Virginia, where the artist adds, "In the town of Pomeiock the buildings are mostly those of the chiefs and principal men." The picture hardly gives an impression of large houses, but the Mandans furnish a case in point. Catlin thought the smaller village "a *summer residence* for a few of the noted families." The large houses mentioned by Capt. John Smith, in Virginia, evidently belonged to chiefs and rich men.

Out of many objections that might be raised from the habits of western Indians, but few can be given now. Mr. Morgan cites, from Carver, the Sauks on the Wisconsin river, who had ninety houses, each large enough for several families. Carver said that the *great* town of the Saukies had ninety houses; adding that "The Saukies can raise about three hundred warriors." The same writer, in speaking of Indian habits, said that the lower ranks were filthy, "but some of the chiefs are very neat and cleanly in their apparel, tents and food."

Passing from these instances of a stage above communism, to a more settled kind of life, the Pueblos may be briefly mentioned. The evidence is so decidedly against communism there that Mr. Morgan has to deal altogether in probabilities. It would take long to describe the life of these interesting people, but Morgan's conclusion may be given: "No evidence has been adduced of the practice of communism by the present Pueblo Indians of New Mexico. . . . The practice of communism must be deduced, for the present, from the structure of the houses themselves." They were liable to serious assaults; "every house is therefore a fortress."

In this brief statement of a fruitful subject, one further question can only be mentioned without discussion: the prevalence of a communal system in Mexico and Central America. A solitary instance has been adduced from Stephens' Yucatan, the only one which the traveler saw, and which he therefore describes. A good deal is taken for granted in Mr. Morgan's comments upon it, but it is fair evidence in the main. If portions of the food, however, were common village property, all was not. Stephens says: "Every member belonging to the community, down to the smallest pappoose, contributed in turn a hog." The communal system was not perfect. Mr. Morgan complains of prejudices in regard to the ruins of Central America. "An impression has been propagated that Palenque and other Pueblos in those regions were surrounded by dense populations living in cheaply constructed tenements. . . . Mr. Stephens has given direct countenance to this preposterous suggestion." Some other original investigators are disposed of in the same summary way.

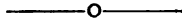
As regards this, a quotation may be made from the Ameri-

can Naturalist, August, 1887. Mr. E. H. Thompson, United States consul at Merida, Yucatan, is making researches among the ruins. "In regard to the uses of these buildings Mr. Thompson differs from most archæologists, who have come to regard them as communal dwellings. Mr. Thompson rather inclines to the view that the dwellings of the people covered a large space, but, being built of perishable materials, have entirely disappeared." At Labna, "the whole region for leagues around this ruin is dotted with low mounds, and small rectangular terraces," apparently the remains of humble homes.

Of the Indians of Columbia river something might be said; of the division of game we have illustrations in our own pioneer life; while the well-known fact that skilled labor existed and was employed among the aborigines, does away at once with true communism.

It will then be found that the Indian communal system has been overstated; that so far as it existed, it was simply a continuation of family relations a little farther than with us; that it was rarely, if ever, universal in a nation, and that there were great distinctions of life between the rich and poor. There was a head to every house, and *his* totem pointed this out in early days. The rule was patriarchal, when rule was needed, and it has been admitted that family life is not proper communism. In thousands of cases the family was no larger than it often is with us.

W. M. BEAUCHAMP.



### ON CERTAIN SUPPOSED NANTICOKE WORDS, SHOWN TO BE OF AFRICAN ORIGIN.

While pursuing my studies of the Lenape and its dialects, in connection with my edition of the *Walum Olum*, I came across some words alleged to be of the Nanticoke dialect, which puzzled me not a little. The Nanticokes, it will be remembered, lived on the eastern shore of Maryland, and we first hear of them definitely through the celebrated Captain John Smith, the friend of Pocahontas. I have traced elsewhere their subsequent history\* until their final disappearance from the soil of Maryland early in this century. They were a remote offshoot of the Lenape or Delaware Indians, but their dialect showed marked differences, and I should think could scarcely have been understood by a Northern Delaware. It was full of strong accents

---

\*The Lenape and Their Legends, p. 22, (Philadelphia, 1885.)

and forcible expirations, very far from the genius of the stately and sonorous Wonami. The Nanticoke has been preserved in two short vocabularies, one by the well-known Moravian missionary, Rev. John Heckewelder, the other by Mr. William Vans Murray. The former has been recently carefully published through the liberality of Prof. E. N. Horsford,\* but the latter, which is in several respects the more valuable, has never been properly or completely put in print, only a few imperfect extracts from it having seen the light. It remains in MSS. in the library of the American Philosophical Society at Philadelphia.

The Nanticoke words, nowever, to which I refer in this paper, are not from these authorities, but from the MS. of the Rev. J. C. Pörylæus. This Moravian missionary labored among the Iroquois and Delaware Indians from 1741 until 1751, when he returned to Europe, and died in 1785.† He left in the hands of his Moravian brethren at Bethlehem, Pennsylvania, a large MS. volume containing essays on the grammatical structure of the native tongues with which he had come in contact, and a collection of notes on Indian traditions. This precious volume was in Heckewelder's hand when he was writing his excellent work on the *History, Manners and Customs of the Indian Nations who once inhabited Pennsylvania and the Neighboring States* (first edition, Phila., 1819), and he made frequent, though not critical, use of it. Now, alas! it has disappeared. I have searched for it in vain in the libraries of Philadelphia and in the Moravian archives at Bethlehem and Nazareth.

When Dr. Benjamin Smith Barton was preparing the second edition of his work, *New Views of the Origin of the Tribes and Nations of America* (which appeared in Philadelphia in 1798), Mr. Heckewelder supplied him with some alleged Nanticoke material extracted from this MS. of Pörylæus. The words were altogether different from those obtained by Mr. Heckewelder himself from members of the Nanticoke tribe, and puzzled both him and Dr. Barton. The latter printed the numerals in the Appendix (p. 5) of his second edition, and added that he had compared them with the corresponding terms in all the North American languages within his reach, but had discovered no affinity whatever.

Indeed, it is evident at a glance that they do not belong to any of the typical North American groups of languages. Not only is their rich vocalic structure apart from these, but the scheme of development of the second quinary group from the first is totally different from the Algonkin and unlike that of any neighboring stock. With Dr. Trumbull's profound study of this

\*Comparative Vocabulary of Algonquin Dialects, from Heckewelder's MSS. (Cambridge, 1877).

†Reichel has given a brief biographical sketch of Pörylæus in his introduction to the second edition of Heckewelder's *History*, p. xxix.

subject before us,\* we should be forced at once to seek some distant source for these perplexing numerals.

The following scheme will show how widely they differ from the Lenape dialects and the Nanticoke itself.

	SUPPOSED NANTICOKE OF PYRLÆUS.	NANTICOKE OF MURRAY.	LENAPE OF NEW JERSEY.†	MISSION LENAPE‡
One.....	Killi.	Nukquit.	Guute.	Ngutti.
Two.....	Filli.	Na-eez.	Niisha.	Nischa.
Three.....	Sapo.	Nis-whu.	Niiha.	Nacha.
Four.....	Nano.	Yaugh-wha.	Naa.	Newo.
Five.....	Turo.	Nup-pai-a.	Pollinuuk.	Palenach.
Six.....	Woro.	Noquttah.	Kuuta-h.	Guttasch.
Seven.....	Wollango.	My-yay-wah.	Niishash.	Nischasch.
Eight.....	Secki.	Tzah.	Haash.	Chasch.
Nine.....	Collengo.	Passa-conque.	Piiskunk.	Peschkonk.
Ten.....	Ta.	Mittah.	Tilluun.	Tellen.

My first thought was that some colony of Arawack or Carib affinities, speaking one of the rich vocalic dialects characteristic of those stocks, had crept up the Atlantic shore as far as Cape Charles. The Timucuas, who dwelt at the mouth of the St. John river, Florida, was probably such a colony, and spoke such a tongue. But an extended comparison disclosed no analogies between these supposed Nanticoke numerals and those of any American nation whatever. It then occurred to me that Pyrlæus, through some mistake, had met a runaway slave among the Nanticokes, and through him, or through some half-Indian, half-negro, had obtained a vocabulary of an African dialect. At that date, about 1750, there must have been many recently arrived negro slaves in Maryland who still recalled their native tongue.

This conjecture proved correct, and a very brief search enabled me to identify the numerals as pure Mandingo, from the Guinea coast. This will be evident enough on comparing the Mandingo numerals, as given by Professor Freidrich Muller, with those from Pyrlæus.

\*On Numerals in American Indian Languages, in the Proceedings of the American Philological Association for 1873, p. 41.

†From an unpublished MS. in the library of the American Philosophical Society.

‡Zelberger, Grammar of the Lenni Lenape or Delaware Indians, p. 106.

	SUPPOSED NANTICOKE OF PYRLÆUS.	MANDINGO OF MUELLER.
One.....	Killi.	Kilin.
Two.....	Filli.	Fula.
Three.....	Sapo.	Sabba.
Four.....	Nano.	Nani.
Five.....	Turo.	Dulu, lulu.
Six.....	Woro.	Woro.
Seven.....	Wollango.	Worong-wula.
Eight.....	Secki.	Segui.
Nine.....	Collengo.	Konanta.
Ten.....	Ta.	Tang.

This, therefore, disposes of the supposed Nanticoke vocabulary of Pyrlæus, and explains the enigma which cost Dr. Barton, and probably others since his time, futile labor to attempt to solve.

But the interest of the subject does not end here. The ethnological study of the negro race within the limits of the United States has never yet received proper scientific attention. The laborious volume of Nott and Gliddon was written to defend a thesis, as was the case with all others while slavery was a burning question in politics. An important inquiry at the outset is as to the original affinities of the negroes brought over as slaves. The native Africans differ vastly among themselves in every characteristic. It is noteworthy that the Mandingos, before the Mohammedan conquest, had established the most powerful empire in West Africa known to history. It was erected on the ruins of the old Berber state known as Ghanata, and extended its sovereignty and language far and wide in western Central Africa. Its members proudly call it *Mellinki* "the land of freemen," to distinguish it from all others, whose inhabitants they scornfully termed *suanki*, "bondsmen." \* Such ethnic parentage is worthy of note in any nationality, be its skin of what color it may.

In another direction this identification is of interest. There has recently been some effort to discover the amount of admixture of African words, expressions, or phonetic peculiarities in the English of the United States. The first question which would arise in such a study would be as to which African linguistic stock we should look as exerting such influence. I do not know that any material has heretofore been published showing what dialects the imported slaves spoke. West Africa has many linguistic stocks, not at all resembling one another. Here is evidence that the Mandingo, at least, was brought to this country, and it should, therefore, claim the careful attention of those who are studying Americanisms of African descent. It is one of four

\*F. Mueller, *Allgemeine Ethnographie*, p. 117, (Wien, 1873).



rather closely allied languages, the Vei, the Susu, the Mandingo, and the Bambara, classed by linguists under the generic name of "the Mande stock." Fortunately we have a classical study of the group from the competent hands of Professor H. Steinthal, of Berlin, which sets forth its characteristics in a most masterly manner.\* Let me express the hope, in conclusion, that ere long we shall have the pleasure of welcoming a study of the negro population of the United States from the standpoint of the scientific ethnologist.

Media, Pa.

DR. D. G. BRINTON.

---

### PORTRAITS OF COLUMBUS IN HAVANA.

Portraits of Columbus were once of great interest to me. In fact I once published a monograph about them. Satisfied myself which one had the best claim to genuineness, I tried to satisfy my readers. Accordingly, I had scarcely escaped the custom-house, in Havana, before I began to search for Columbian presentments, whether counterfeit or genuine.

All memorials that I discovered were in or near the palace of the governor general. In front of it, just across a pretty park of glorious palms, I saw a bust of Columbus, in front of the *Templete*—a chapel, which contains his heart, and which is opened only once a year, namely, on his death-day, to say a mass for the repose of his soul. There is another bust in the cathedral, which is also close by the palace. This carving, to the left of the high altar, is draped in armor, though with a cheese-shaped ruff round his neck. His right forefinger is laid on a large globe before him. An inscription beneath affirms what all San Domingans deny—that the remains of the great navigator are there reposing. In the municipal hall of the palace I inspected an oil portrait which has been dubbed Columbus, but which the Havanese admit to look much like a familiar of the inquisition. The fourth likeness of the great discoverer which I discovered stands in the center of the grand court of the palace. It is a marble statue and on a high pedestal. None of these likenesses claim any considerable age, or realistic resemblance to the man it delights to honor. None, except perhaps the last, has any dignity or artistic merit. But Saul seeking asses found a kingdom, and I was almost as lucky, for I fell in with a gentleman whose special study had been Columbian portraits, who had met with my booklet, and whose conclusions, fortunately—fortunately for me—tallied with my

---

\*Die Mande-Neger Sprachen, Berlin, 1867.

own. He had even voyaged to Florence, and had painted there, under his own eye, a fac-simile of the portrait which I had tried to prove most authentic. He welcomed me as a brother by the higher birth.

This Columbian friend opened a way for me, as a needle does for thread. He proved to be a senator representing the university in the Spanish *cortes*, and the author of several works on Columbus. He was also a sugar-planter, and owner of a magnificent suburban villa, which, as the American consul assured me, it was rare good luck to have made accessible. Don Jorin, for that is the senator's name, being called to a distant part of the island—after introducing me to his brother, of whom more another time—gave me a card ordering his servants to let me “take possession of his house, No. 428 Cerro.” Here, as in all regions of Latin races, grandeur and gloom lie side by side, like death and life at sea parted only by a plank.

Along the whole front of the Cerro villa, which is painted bright yellow, stretches a portico floored with Italian marble. Nor do I remember a single room within, or corridor round the court, that lacked a similar pavement—a luxury that can not be rightly valued in any more northern latitude. Every wall was hung with its picture, usually a copy of some famous original, and cases of bric-a-bac, foreign and domestic, were not wanting. The Columbus fac-simile, however, was naturally the first cynosure of my eyes. I had the curiosity to measure its width, and found it seventeen inches, which I knew to be that of the original.

But the king's daughter is all-glorious within—and the glory of a tropical house is its inner court. Cool and shady seats on the marbled verandah; easter flowers, oleanders, with orange trees in flower and fruitage at once, shed abroad fragrance; and the ostrich plumes of high-topped palms without, waved over the roof. But what charmed me most was the sound of falling waters, which was sweet music, and added to the sultry air a freshness better than any fragrance. The truth was that a brawling brook had been so managed as to tumble in a copious cascade beside the court. Nor was this all. As I strolled in the garden, noticing a considerable seven-windowed building rising in a dome and spire, I asked if it was a chapel. The answer was, “No, it is our bath.” When I entered the edifice, I saw, in addition to ordinary bathing lavatories, a large oval swimming pool. The brook that had delighted me in the court paid a double debt, and was here again to exhilarate, purify and invigorate.

As to the garden, I despair of giving any idea. The jungles of bamboo come up in a night, like Jonah's gourd, but remain in permanence. In a tropical region I never get over surprise as I see the exotics familiar to me, stunted and not half alive at the North, in the South putting forth all their might, and as

rank and rampant as our thistles. But the peculiar pride of the senator's garden is a unique specimen of the royal palm. This tree was styled by Humboldt the culmination—the very crown of the vegetable kingdom. No trunk is such a symmetrical column, no top is such a capital or turban. Twin palms are rare, triplets more remarkable. But the Jorin palm is sixfold. Each of the six sisters, starting from one stump, has a twin-like resemblance to all the others, and all have well-developed trunks, and above, soaring and sweeping pinions of foliage. Such a wonder heightens my idea of the legendary *Calmetum coeleste*, which yielded the palm-branches that the Revelator saw waving in homage before the throne in heaven.

PROF. J. D. BUTLER, LL.D.



### THE DOCTRINE OF PROVIDENCE AS HELD BY BY THE ORIENTALISTS IN ANCIENT TIMES.

The doctrine of providence as taught in the sacred scriptures seems to be a matter of revelation exclusively, but the examination of the sacred books and monuments of the East shows that it is like the doctrine of creation, concerning which we have spoken, a subject concerning which the human mind naturally entertains many thoughts. The study of comparative religion shows this, proving also that revelation and right reason always correspond. The doctrine of providence grows very naturally out of the doctrine of creation; for the intelligent creator would certainly take care of his own creation, and the Divine Father would certainly watch over and protect His own children. Did not Polytheism originate in a universal belief in divine providence? Is it not the recognition and worship of the divine in everything, and of the controller of all events? This shows faith in providence. Osiris, among the Egyptians, was recognized as the perpetually presiding lord of the lower world, the king and the judge of Hades or Amenti. His worship was universal throughout Egypt.\* A special character of goodness attaches to him. We find him called the "Manifester of good," "full of goodness and truth," the beneficent spirit, "beneficent in will and words," "mild of heart," and "fair and beloved of all who see him."† Such a character could belong only to a god who was a providence as well as a creator. This shows that the doctrine of providence was embraced in the theological teaching of the ancient Egyptians. Neith, or Net, was the

\*Herod II, 41, with Wilkinson's note.

†Records of the Past, Vol IV, p. 99. Wilkinson's Ancient Egyptians, Vol. IV. p. 320.

female correspondent of Khem, the conceptive elements in nature as he was the generative. Her titles are, "the mother," "the mistress of heaven," "the elder goddess."<sup>1</sup> The idea here presented is one of special love, care and protection. Motherhood is a beautiful and striking manifestation of providence.

Asshur, the Assyrian substitute for Hor Ra, was primarily and especially the tutelary deity of Assyria, and of Assyrian monarchs. The land of Assyria bears his name without any modification; its inhabitants are his servants, or his people; its troops the armies of the god Asshur. As for the kings, they stand connected with him in respect of almost everything they do. He places them upon the throne, firmly establishes them in government, lengthens the years of their reigns, preserves their power, protects their forts and armies, directs their expeditions, gives them victory on the day of battle, makes their name celebrated, and multiplies their offspring. To him they look for the fulfillment of their wishes, and especially for the establishment of their sons on the Assyrian throne. Their usual form of speaking of him is "Asshur, my lord." They represent themselves as passing their lives in his service.<sup>2</sup> There was in Assyria and Babylonia a divine triad that was worshiped as supreme in government.<sup>3</sup>

In the religious teaching and worship of the early Sanskrit Indians the god Agni is called the ruler of the universe, the lord of men, the wise king, the father, the brother, the son, and the friend of man. All the powers and names of the other gods are distinctly assigned to Agni.<sup>4</sup>

In another hymn, Varuna is "the wise god, the lord of all, the lord of heaven and earth, the upholder of order, he who gives men glory."<sup>5</sup> It is the same with Indra. He is the ruler of all that moves, the mighty one, he to whom there is none like in heaven and earth."<sup>6</sup> Indra is indeed the main object of admiration. "He is the sovereign of the world, the all wise, the abode of truth, the lord of the good, the animator of all, the showerer of benefits, the fulfiller of the desire of him who offers praise."<sup>7</sup> This is a clear presentation of the doctrine of providence.

Mitra and Varuna are the "observers of truth," "imperial rulers of the world," "lords of heaven and earth," "protectors of the universe." "mighty deities," "far seeing," "they uphold the three realms of light," "scatter foes," "guide men in the right way," "send rain from heaven," "grant men their desires,"

1 Bunsen *Egypt's Place*, Vol. I, p. 386; Wilkinson's *Ancient Egyptians*, Vol. IV, p. 285.

2 *Records of the Past*, Vol. I, p. 17; Vol. III, 86, 83, 95, 96.

3 *Records of the Past*, Vol. VII, p. 121, Vol. IX, pp. 100, 106.

4 Max Muller's *Chips from a German Workshop*, Vol. I, p. 28; *Science of Religion*, p. 14.

5 *Ancient Sanskrit Literature*, pp. 536, 537.

6 *Ibid.*, p. 546.

7 *Rig-Veda*, Vol. II, pp. 36, 145, 283.

and "procure for them exceeding and perfect felicity."\* The divine administration is here described as being perfectly adapted to the nature and wants of man.

The general character of the names given by the Phœnicians to their deities is remarkable. A large proportion of them are honorific titles, only applicable to real persons, and indicative of the fact that from the first the Phœnician people, like most other Semitic races, distinctly apprehended the personality of the Supreme Being, and intended to worship not nature, but God in nature, not planets, or elements, or storms, or clouds, or dawn, or lightning, but a being or beings above and beyond all these, presiding over them and working through them, but quite distinct from them—possessing a real personal character.† El signified the strong and powerful, and in the cognate Hebrew took the article and became *ha-El*, "the strong one." He who alone has true strength and power, and who, therefore, alone deserves to be called strong or mighty. Eliun is the Exalted and Most High, and is so translated in our authorized version of Genesis XIV, 18‡

Sadyk is the just, the righteous. Baal is lord or master, and equivalent to the Latin *dominus*, and hence a term which naturally requires another after it, since a lord must be a lord of something. Hence in Phœnician inscriptions§ we find *Baal-Tsur*, "Lord of Tyre," *Baal-Tsidor*, "Lord of Zidon," *Baal-Tars*, "Lord of Tarsus," and the like. Hence we also meet with such words as *Baal-berith*, "Lord of treaties," *Baal-peor*, "Lord of Peor (a mountain)," *Baal-zebub*, "Lord of flies," and *Baal-samin*, "Lord of Heaven."¶ It is probable, though it can not be proved, that these various names, excepting the last, were originally epithets of the One Eternal, and Divine Being, who was felt to rule the world, and that whatever may have been the case elsewhere, the Phœnicians at any rate began with the monotheistic idea, whether that idea originated with themselves or was taught them by a primitive revelation. If this be true we find revealed in the very names by which they called the supreme object of their worship the doctrine of providence. The religious nature of man demands a Father as well as a creator, and looks to God for care and protection. The Etruscans, as a part of their religion, recognized an overruling providence. There seems to be no doubt of the fact that religion occupied a leading position in the thoughts and feelings of the Etruscan nation. With Etrusca, says a modern writer, religion was an all pervading principle, the very atmosphere of her existence—a leaven operating on the entire map of society,

\*Ibid, p. 349.

†Max Muller's Science of Religion, p. 177.

‡Ancient Religions, p. 102.

§Gesenius Scripturæ Lingæque Monumenta, pp. 66, 277.

¶Philo Byblius in the Fragmenta Historicorum Graecorum, Vol. III, p. 565.

a constant pressure ever felt in one form or another—a power admitting of no rival, all-ruling, all-regulating, all-requiring.”<sup>1</sup> Levy calls the Etruscans a race which, inasmuch as it excelled in the art of religious observances, was more devoted to them than any other nation.”<sup>2</sup> Faith in providence is an essential element in all true religion, and the Etruscans must, therefore, have had this faith largely developed and in lively exercise. The main character in which the Gods of heaven and earth were recognized by the Etruscans was that of rulers, signifying and sometimes executing their will by means of thunder and lightning. They ruled, rewarded, and punished man through nature.<sup>3</sup> Faith in the infliction of divine judgments through the terrible and destructive forces of nature made fear one of her most powerful religious emotions.

In the religion of the Greeks Zeus is the Father of Gods. When we ascend to the most distant heights of Greek history the idea of God as the Supreme Being stands before us as a fact.<sup>4</sup> Zeus, said an ancient poet, is the beginning; Zeus the middle; out of Zeus have all things been made. Zeus was the Lord of the upper regions, who dwelt on the summits of the highest mountains, gathered the clouds about him, and shook the air with his thunder.<sup>5</sup> Zeus bears to man the relation of Father. He was addressed as God, our Father. St. Paul says, quoting a Greek poet, “we are his offspring.”<sup>6</sup> The Father is the providence of His children. He takes care of and provides for them. Apollo seems to have been originally like Zeus, a representative of the one God;<sup>7</sup> and as such he was worshiped in parts of Greece where Zeus was unknown.

The religion of the ancient Romans recognized a providence. The different gods of the Romans represented the different natural forms in which the one God revealed himself in nature and providence. Nature worship is the form in which man’s faith in a universal providence manifests itself; or in other words, men do not worship nature, but God as revealed in and working through nature.

WILLIAM TACKER.

Mt. Gilead, O.

1 Dennis, *Cities and Cemeteries of Etruria*, p. 49.

2 *Gens ante omnes alias eo magis dedita religionibus, quod excellent arte colendi eas*, Levy V, 1.

3 Plin. I. S. C.; *Amm. Marc.* XVII, 10.

4 Max Muller *Chips*, Vol. II, p. 158.

5 *Ancient Religions*, pp. 134.

6 *Aratus Phaenomena*, II, 1, 15.

7 *History of Greece*, Vol. I, p. 59.

K

## ÆNONE, THE FORSAKEN.

Thy sculptured image, gloriously fair,  
 Stands in a deep recess in mem'ry's hall;  
 I see thy faultless face and falling hair,  
 Thy drooping eyes and form, while over all  
     A subtle cloud of sadness ever hangs,  
 As if protecting from the careless eye  
 Of common men, who can not feel thy pain;  
 The pathos of thy story's misery,  
 That to a woman's heart is all too plain.

How deep the dagger pierced—how keen the pangs  
 Thy soul endured, when Paris, thy beloved,  
 Found charms in Helen, "the most beautiful,"  
 Beyond thine own, and basely faithless proved;  
 Betrayed thy trust, and wronged another son  
     Of Adam, e'en his loyal friend and host.  
 Then followed years of bitter, vengeful strife,  
 And brave men died and loving women mourned,  
 While orphans filled the land, and gold, as life,  
 Was freely poured upon the battle-ground.

And all for what? Ah, fatal beauty's cost!  
 Thy day of triumph came—but all too late.  
 Thy recreant lord sought thee in that dead hour  
 When the slow-moving, grinding wheel of Fate  
 Had turned on him its crushing, deadly power,  
     To beg of thee to heal an arrow's wound.  
 Forgetting then that in thy heart yet lay  
 Another poisoned shaft, sped by his hand.  
 The ruling passion—love of self—that day  
 Brought him to thee. There thou didst coldly stand

And see him writhe, by torture firmly bound.  
 His suppliant tone smote on a heart long dead.  
 No tears fell from thine eyes—they all were shed.  
 Love, Mercy, Pity, from thy breast had flown,  
 Pride only lived to mark his dying groan;  
 Then deep remorse awoke, and with a cry  
 Of agony, thy hand cut loose the tie  
 That bound thee to a loveless, empty life—  
 A childless widow—a deserted wife.

—HARRIET NEWELL SWANWICK.

Chicago, 1887.

## Correspondence.

---

### MOUNDS AND LODGE CIRCLES IN IOWA.

*Editor Am. Antiquarian:*

In November last I examined certain mounds and other remains in the extreme northwest corner of this state. The locality is on the B., C. R. & N. R. R., near the station *La Valley*, or "Brown's." The spot is close to the "Little Sioux," on a high ridge overlooking that stream. Mounds in great numbers cover the hillside and crown the summit of the ridge. Across the river, in Dakota Territory, a similar ridge presents similar mounds.

The mounds show no evidence whatever of regular arrangement, and as my time was short I made no plot of the area covered by them. We spent two days on the ground and the following description includes my own observations and those of Messrs. Cotton, Nash and White, who have spent more time there in the employ of the railroad company.

Most of the mounds are circular, 30 to 50 feet in diameter and from two or three to six or eight feet high. A few are oval and somewhat larger than the above figures indicate. There are perhaps some scores of these mounds here.

Among these mounds are many stone circles or ovals. These are made with "niggerheads" or boulders. These circles are scattered over the ridge without arrangement. Though some mounds occur among them, it may be said that the mounds surround the area covered with the stone circles, in a rude oval. This statement must not, however, be taken too emphatically. Circles of stone occur outside this area and mounds within it.

The whole ground about the mounds and circles is strewn with flint flakes, arrowheads, scrapers, fragments of pottery, etc. Stone mauls of good workmanship and neat appearance are picked up in this neighborhood.

To be more specific: We opened two mounds (Nos. 1 and 2), and have the specimens found in another (No. 3), and data regarding a fourth (No. 4). In mound No. 1 we found the material a hard gravel, difficult to dig. Patches of ashes were found. At two feet depth was a skeleton with head to the north and body



extended toward the south. All the bones were found in fair preservation. No relics were discovered.

In No. 2 some fragments of bone, some ashes, and some bits of pottery were found. The following structure was revealed: 1. Gravel. 2. Black soil. 3. Ashes and black soil. 4. Gravel. The bones and potsherd were from layers two and three. Mounds three and four were alone, south of the railroad and south of the above mound.

No. 3 yielded skeletons of two adults, a child and a horse. A pipe was found here. Lower down another human skeleton was found—an adult—and also the skeleton of a dog wrapped in buckskin. With these remains were found six *iron* bracelets, fifteen feet of wampum (three shell wampum), a grinding-stone and a red pipe-stone pipe. The skeleton had earrings of copper, *attached* to the head. Where the copper had oxydized, it had *preserved* the skin and the hair. This peculiar specimen was sent to Burlington. This mound was encircled by a stone circle. Mound No. 4 yielded a peculiar "stone wheel," an arrowhead, a pretty little maul of reddish granite, part of a pottery jar, and some very hard bone fragments. A line of stones was laid along the surface at each end of this mound. These lines were six or seven feet apart. The stone wheel found here deserves description. It is of a hard, dark-colored rock, perfectly polished and of very fine finish. The wheel is six inches in diameter, perfectly round in outline, perforated at center by a small hole. The sides are perfectly concave. The stone at the central perforation is not more than a quarter or three-eighths of an inch thick, while at the rim it is one and a half inches thick. The surface of the rim is convex. The stone is evidently for use in some pitching game and is as fine as any of the specimens of the kind from the south. [This stone is probably a Chunky stone.]—Ed.

The stone circles interest me. From my note-book I copy one or two descriptions. The first is near mound No. 1. This "ring" is slightly elliptical. It consists of 110 boulders, averaging about one foot in diameter. They are set almost close together; the boulders are of all sorts—quartzite, gneiss, granite, schist, etc. In another ring the stones are nearly all of one kind—limestone. In a third about two feet intervene between stones. One ring was 63x37 feet and contained 197 stones. Almost all these stone circles have an opening from one foot to four and a half feet wide at the southeast. Some few are "*double*," one circle concentric with another. Some have "guard stones" at the opening. Some confluent circles are made, at points of contact, from some stones. One group of confluent rings consists of seven circles, two of them "*double*". The "circles" are generally supposed to be lines of stones to hold down the edges of skin tents. The fact that the "openings" or breaks in the rings face southeast while the almost continuous prevailing lines are from the northwest favor this idea. How-

ever *all* these lines of stones cannot be "tent anchors." For instance the "ring" around mound three, the lines upon mound four, or a very peculiar instance noticed on a steep side hill, where a great granite boulder is surrounded with a ring of lesser boulders and gravel stones, not accurately circular but rudely heart shaped. [The use of one kind of stone for the circles may be compared to the use of one kind of word for graves noticed by Lapham, iron wood for one grave, oak for another, etc.—Ed.]

A missionary of the American Sunday School Union, visiting our collection, told me that the stone mauls, such as we found in considerable quantity, are yet common among the Dakotas, who use them in preparing food. Choke cherries are gathered, pounded to a pulp with these mauls, kneaded into cakes and dried. Also a peculiar tuber, with somewhat the structure of an onion, is gathered, the outer skin is husked off and the rest is pounded by these mauls into a meal, which is mixed with water moulded into cakes and cooked. Such are some of the uses of such mauls; probably there are many others, an Indian implement is capable of manifold uses.

The state of the bones, the condition of the wampum, the preservation of buckskin, the presence of iron and the bones of a horse, all show these mounds to be comparatively recent. The story told by these relics seems to be of a camp of Dakotas where tents were pitched closely together. The dead were *buried* in mounds near the outskirts of the settlement. The site was occupied for some years. Trade with the whites of the east had begun. The relics date back scarce a century but the mounds, the workmanship of the pipes, the "stone-wheel," the mauls and the pottery all speak well for the industry and taste of the makers.

Cedar Rapids, Iowa.

FREDERICK STARR.

---

## RIVER DWELLINGS ON THE MUD FLATS OF DELAWARE RIVER.

*Editor Am. Antiquarian:*

In 1870 a fisherman living in the village of Marcus Hook, Pennsylvania, gave me some spear and arrow heads flaked from a dense argillite, as well as other rude implements of a pre-historic people which he had found on some extensive mud flats near the mouth of Naamans creek, a small tributary of the Delaware river. The finder stated that while cat fishing among the reeds and spatter docks he had noticed here and there the ends of logs or stakes protruding from the mud, and that they seemed to him to have been placed in rows—to use his own words "they

were as rotten as punk, and he could see no reason why they'd been put there by white folks—more likely the Indians in old times used them for to hitch their canoes to when spearin, fish, and that was the reason the darts and axes and such like were found around 'em."

A visit made a few days afterward to the place in company with this simple-minded old fisherman disclosed the ends of much decayed stakes or piles protruding here and there above the mud, just as he had stated, and confirmed what I had before heard in regard to the piles from a pot hunter, or professional reed bird gunner, who encountered them in his skiff while poling off the march homeward, after the water had fallen somewhat on the ebb tide. At the time (1870) I coincided in the fisherman's views about the spot having been a fishing place of the Indians, as the finds of argillite implements seemed only to exist in the neighborhood of the poles or stake ends. Professional duties did not permit me at this time (1870) to give the matter attention, and it was not until my return from France in 1880, whither I had gone to pursue my studies at the Ecole des Beaux Arts, that I again visited the spot on the flats in the cove at Naamans creek, where the finds had been made. While abroad I studied in spare moments many archæological collections, especially those from the Swiss Lake Dwellings, and visited the various lake stations of Switzerland. The rude dressing of the ends of the piles in some places were evidently made with blunt stone implements, and recalled those I had seen on the ends of the posts in the Delaware river marshes. Since 1880 I have quietly examined the remains, excavating what pile ends that remained *in situ* (preserving a few that did not crumble to pieces), preserving careful notes of the dredging and excavations (at low tides), carried on principally by myself, aided at times by interested friends.

The results so far seem to indicate that the ends of the piles imbedded in the mud, judging from the implements and other debris scattered around them, once supported shelters of early man that were erected a few feet above the water—the upper portions of the piles having disappeared in the long lapse of time that must have ensued since they were placed there—(the flats are covered by four and one-half feet of water on the flood tide; on the ebb the marsh is dry and covered with slimy ooze several feet in depth, varying in different places). Three different dwellings have been located, all that exist in the flats referred to after a careful examination within the last four years of nearly every inch of ground carefully laid off and examined in sections.

The implements found in two of "the supposed river dwelling sites" are very rude in type, and generally made of dense argillite, not unlike the palæoliths found by my friend Dr. C. C. Abbott in the Trenton gravels.

The character of the implements from the other or third supposed river dwelling on the Delaware marshes are better finished objects made of argillite, indicating a greater antiquity than ordinary surface found Indian relics. At this pile dwelling a human tooth has been found and fragments of a jaw bone, ends of scapulæ, etc. It is my intention later on to present my specimens to the Peabody Museum of Ethnology and Archæology at Cambridge, Mass.

H. T. CRESSON.

4,685 Knox St., Germantown, Philadelphia, Pa.

---

## MOUNDS IN MICHIGAN.

*Editor Am. Antiquarian:*

I have found a number of "mounds" in this part of the state, somewhat as follows: Some contained relics and some did not. Were they Indians or mound-builders? They are either round or oblong; if round, from 10 to 30 feet in diameter; if oblong, from 3 to 4 feet wide and 6 to 15 feet long; in both cases the sides have a true slant all around of about 45 degrees, top slightly rounded up, and a ditch about 3 feet wide and from  $\frac{1}{2}$  to 2 feet deep all around the mounds, the mounds raised from 1 to  $2\frac{1}{2}$  feet above the level of the surrounding land, and usually dug down till the sand is reached, sometimes not more than 6 inches, and sometimes, though rarely, 3 feet deep. In some instances human remains, or faint traces of them, are found. When we can make them out in a circular mound the feet are placed toward the center, heads out; if oblong and more than one body, they are placed feet to feet.

In your opinion are these Indian or Mound-builder works? An early answer will greatly oblige.\*

I am very respectfully,

W. H. SHELTON.

---

## POTTERY VASES—ARE THEY FRAUDS?†

*Editor Am. Antiquarian:*

Some time since, while passing through a shop for the sale of antique furniture, &c., I discovered several images and other objects in baked clay, and found they were marked "Egyptian." In my mind I immediately questioned their oriental origin and believed them, to be Central American; I so expressed myself to the saleslady who explained that she was unable to speak

---

\*See answer to this letter under Literary Notes.

†See comment by Editor under Literary Notes.

positively, but that they came from Europe and were invoiced as "Egyptian."\* I was kindly permitted to make drawings and thinking them of sufficient interest, I take the liberty of submitting them.

The object represented in No. 1 is actual size, in red baked clay and is about  $1\frac{1}{2}$  inches thick. The edges and back are smoothly moulded (as if by hand), showing it to be complete in itself. The drawing is a copy of a rubbing and is therefore correct. The figure represented is in low relief.

Searching in Brant Mayer's *Mexico*, vol. 1, p. 3, I find an illustration which is almost the exact counterpart of our drawing represented as carved on the bottom of the god "Teoyaorniqui the spouse of the god of war" whose tender duties were confined to conducting the souls of warriors who perished in defense of their homes and shrines, into the "house of the sun," which was the Aztec heaven.

No. 2 represents a solid clay image in a kneeling posture. It is about  $\frac{3}{4}$  size.† The features best seen in profile show well marked Aztec characters. The top portion of the head is broken off, it was probably a portion of headdress. The back of the figure, as seen in the profile, represents a face, the nose, a large one (even if natural) is not grotesque, and has a piece broken out in the upper part. Above the eye in the figure is a small hole which passes through the nose from side to side, as if to pass a cord through, though possibly it was to prevent the cracking of the figure in burning.

In figure 2 the front view, the characteristic features are not well drawn, but show the figure to be nude except a small apron over the genitals. The head dress is broken away upon one side and the top of the head broken away as noted in the profile.

In figure 3 the back view represents a human face somewhat grotesque, having upon it sundry markings all deeply made in the clay as also deeply made lines upon and running parallel with the arms. A necklace and pendant are about the neck. Across the shoulders, extending from the middle of the back, are what appear to be two serpents, their heads coming together on the middle line of the chest. The shoulder coverings also represent serpent heads, being marked the same as the others. On the front of the chest, immediately under the serpents heads are two animal heads (one on each side of the middle) and while not well marked as to kind, seem to me to be intended for panther heads. The skirt has nothing to identify it, but most likely a textile fabric. The overtunic is made up of various materials—the sides appear as if made up of the skin of a spotted animal, the front and back being composed of material representing serpents,

\*These objects were subsequently marked "Central America" after I had shown the parties that they were not Egyptian but Mexican and Central American.

†Full size nearly 8 inches high.

those on the being larger than those in front. The images were probably household gods, but what meaning or attributes they represent I am at present unable to even conjecture.

No. 4 represents an oval object, actual size, in baked clay, and resembles a paperweight. The figures, etc., are all cut into the clay. In the center the sun, moon, and three stars seem to be symbolical, relating to the religion of the times when they were made.

Desire Charnay in his "Ruins of Central America" (North American Review, Sept., 1880), has a photograph of "Teoyamici, god of war and death," resting upon a pedestal on the front of which is carved in relief, on a circular elevation, a representation of "the god of the nether world," which corresponds with our figure, as also that upon the bottom of Teoyaomiqui, except that it seems as if the hands and feet, the dragon heads and stars, and the emblems at the upper part have been cut off in making the circular elevation.

In "First Annual Report of the Bureau of Ethnology, page 232, figure 53, Huitzilopochtli" corresponds with Teoyaomiqui of Brantz Mayer and Charnay.

Edward S. Holden in his article "Central American Picture-writing" in "1st Annual Report of Bureau of Ethnology" shows figure 56, "Miclantecutli, the god of hell" the same as depicted by Brantz Mayer.

Holden gives an illustration, figure 53, of Huitzilopochtli, the god of war, which corresponds with Teoyaomiqui of Brantz Mayer and Charnay. Though Mayer in the text speaks of Huitzilopochtli, god of war, and Teoyaomiqui, his spouse, he speaks of the illustrations as being in the feminine gender. From Charnay I infer that he makes Teoyamcici masculine, while Holden makes Teoyaomiqui as feminine and goddess of death, but makes no illustration. These expressions are apt to be very confusing, which Holden endeavors to clear away in the following manner. "These three" viz: Huitzilopochtli, Teoyaomiqui and Miclantecutli, "were a trinity well nigh inseparable. It has been doubted whether they were not different attributes of the same personage. In the natural course of things it would become differentiated into its parts, and in process of time the most important of the parts would each receive a separate pictorial illustration." There is a decided association in the attributes war, death and hell. I also see that the idea of life, death and the resurrection or future state may be deduced from this, though the last is not very clear.

It is not easy to conjecture, but my inference would be that as our specimen is so small, as compared with the other examples of the same mentioned above, that it partakes of the nature of a household god, with power to protect from evil spirits. The position or attitude of the figure is one which tends to show its

complete control of the evil spirits, and the sun and stars indicate to me the universality of that power.

It is well known that the sun in particular was an object of worship by all the people from the Rio Grande to Peru, and that temples and altars were erected for the performance of the religious rites and sacrifices. The famous Temple of the Sun at Cuzco, and despoiled by Pizzaro and his vandals, had in it a most magnificent golden representation of the sun. Where sun worship exists there also will be found the worship of the moon and stars as subsidiary deities, and doubtless inadvertently contributing to the idea of the Triune God.

Respectfully submitted,

A. C. W. BEECHER, M. D.

523 South Ninth street, Philadelphia, Pa.

---

## THE WORSHIP OF PRIAPUS AMONG THE INDIANS OF BRITISH COLUMBIA.

*Editor Am. Antiquarian:*

Doubtless it is not generally known, if at all, that the aborigines of this province from time immemorial, and to some extent to this day, are worshipers of Priapus, which is known amongst them, not as Baal Peor, or Peor Aphis, but by the name of Slo-caw, and is worshiped as the giver of fertility by married women. Their mode of worship partakes of at least two different forms. First, like the native women of Hindoostan, a lingam, a representation of the male generative organs, is suspended on their bosom by a band or strip of deer skin fastened around their necks and worn in the same manner as the cross (the wearing of which had the same origin) is worn at the present day by women who uphold the tenets of the Romish church.

The Hindoo women wear lingams of gold, our aborigines are ignorant of the metals more than of burnt clay, which the following will prove. A few years ago, while engaged opening a burial mound, I found what appeared to be a female skeleton with part of a lingam of burnt clay by the skull. Entire ones of the same material are not infrequently found in ancient and modern groves on the mainland, showing that they had been worn by the deceased.

The second mode is to carry on their person little images representing the sexual act. These little images may be carved out of wood or stone, or of printed calico, clippings from the wife's dress. I have not as yet found any of these representations depicted on their houses, dishes, canoes, or on their col-

light. What other remains were there discovered, I have not ascertained. The metal is only slightly corroded, and to some observers will seem to have been cast, but to more, perhaps, to have been rolled between flat stones.

Mr. W. has another treasure-trove in some respects still more note-worthy than his spear, though that in comparison with others is as gigantic as that of the Philistine, huge "as a weaver's beam." It is nothing less than the kit of copper tools—thanks to which a pre-historic artisan was thoroughly furnished for his work,—a complete list.

A halfbreed squaw, while traversing a wooded swamp near Port Brady (Sault St. Marie), treading as she thought on a mossy clod or hummock, saw it burst beneath her foot. Looking into the matter she perceived that she had broken open a bag of twenty-five copper utensils,—most of them each *sui generis*. The metal, oxidizing, had permeated the inclosing bag and given the mass the color of verdigris. The copperized cloth which she neglected to preserve would have been of more interest than any one of the tools it contained. The only remnant of such pre-historic cloth I have seen, covering part of a chisel in the Davenport museum, makes that copper worth more than its weight in gold, and is itself eternised by the copper which has infiltrated into every thread of its warp and woof. The gem and the setting, each bears witness to the other.

Our Madison treasury of coppers, acquired in 1875, was one of the earliest in the country or out of it. In the number of articles—more than 200,—in their size, variety of style, and workmanship—it claims to stand still in the front rank. But its managers, for the love of new light on the copper-age, would be glad to see it to-day outranked by a dozen collections, all tending, like its own gatherings, to illumine "The dark backward and abysme of time."

J. D. BUTLER.



## Editorial.

& Part 4. A

GEOLOGY, GEOGRAPHY AND ABORIGINAL HISTORY.—HOW ARE THEY RELATED?

We present with this number as a frontispiece, a picture of Buffalo in 1812 and several wood-cuts illustrative of the geological structure of the region subsequent to the glacial period. Our object in using these cuts is to show the connection between the modern history and the prehistoric times. The location of the city is worthy of notice. The chain of the Great Lakes may be said to end here, especially if we consider Lake Ontario as the broadening of St. Lawrence river. It is also near the headwaters of the Ohio River.

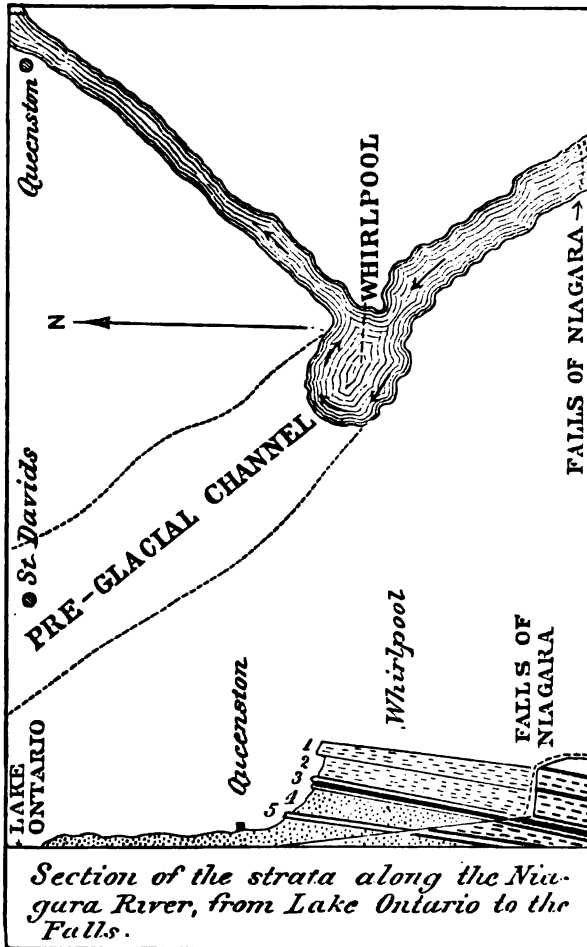


FIG. 1.

The drainage of the eastern half of the Mississippi valley commences near this point. The drainage of the St. Lawrence river.

The drainage of the eastern half of the Mississippi valley commences near this point. The drainage of the St. Lawrence river.

rence valley also commences at the foot of the falls of Niagara. The water runs both ways. One may travel by railroad

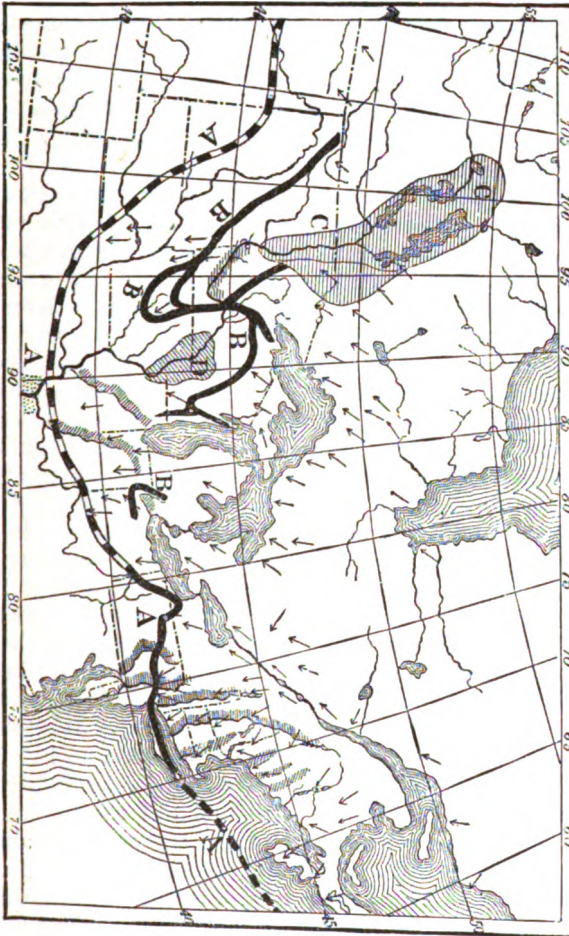


FIG. 2.

from Buffalo to Duluth and not get beyond the chain of lakes which have their outlet here. One can travel from Buffalo to Cincinnati, and from Cincinnati to New Orleans, and not get beyond the water of the river which has its source near here. These geographical features of the locality must be taken into the account when we consider the aboriginal history of the country. The frontispiece gives to us the terminus of that history, for the

war of 1812 may be said to have marked the end of the aboriginal occupation of this whole region. The beginning of aboriginal history cannot be ascertained, but the course of the history may be understood if we take into account the different factors which are at our hands. We propose to consider the relation of the aboriginal history to the geographical and topographical features of the country, taking the frontispiece as a text for the subject.

I. Our first point will be as to the geological structure of the country: Geologically considered the region is somewhat remarkable. (1). The Niagara gorge has worn back from Queenstown, a distance of about twenty miles. The majority

of this distance, or the distance from Queenstown, was worn before the glacial period. Subsequent to that period the wear has been from the Whirlpool up, a distance of about two and one-half miles. There is an old channel through which the lakes formerly flowed, situated about ten miles east of Buffalo. This channel was filled up during the glacial period, and a new out-let was found. The time which it has taken for the Falls to wear up from the mouth of the channel to the present point, according to Prof. Pohlman, would be about 7,000 years. In a letter from Prof. G. F. Wright, he says: "As to the Niagara gorge, there is not much to be added to the articles I published four years ago in the *Bibliotheca Sacra* and in the *American Journal of Science*, except that we now know more definitely, the rate of erosion. The evidence is not conclusive that much of the gorge above the Whirlpool is preglacial. The Niagara river did not run there in preglacial times. So, whatever was eroded, was by a smaller stream. Gilbert, however, is confident that 7,000 years is abundant time for the recession of the gorge all the way from the escarpment at Lewiston to the present falls." Prof. Wright has furnished a cut (Fig. 1) which was used in his work on *Science and Religion*, which shows the relation of the gorge to the action of the glacier. This makes the date of the glacial period much later than was at first supposed.

(2). The terminal moraine. (Fig. 2.) The rivers which flow into Lake Erie all turn westward, that is, after they reach a point about ten miles from the mouth. This shows that during the glacial period the flow of the water was toward the west, and the outlet was near Toledo. The Maumee and the Wabash rivers were the channels at that time. Buffalo, Toledo and Chicago are situated at points where, during the glacial period, the water flowed in different directions. The effect of the geological changes during that period was to obstruct the channels and send the water in the opposite direction, northeast instead of southwest. Buffalo has changed places with Chicago. It is at the foot of the lakes instead of the head, whereas, before the glacial period, Chicago was at the foot and Buffalo at the head. This is the first point.

II. The geographical feature during the prehistoric times, next comes up for notice. The early maps show the condition of the country during this time. 1st, let us consider the portages. There was one portage from Lake Erie to Chatauqua lake. Another from Lake Erie at Erie, to the French Creek, near Waterford, Pa. It was used by the French, hence the name. Another portage existed between the Cuyahoga River and the Tuscaroras near Akron, and the Scioto near Upper Sandusky. These portages made it easy for the natives to cross over from Lake Erie to the Ohio River, and it is probable that there was

considerable travel between the two regions. Still, the prehistoric works indicate that one class of people dwelt on the shore of the Great Lakes and another class called par excellence, the Mound builders on the Ohio River, and the headwaters and the tributaries to it. The portage between the Wabash and the Maumee was about six miles long. Another portage existed between the Kankakee and the St Joseph Rivers near South Bend, and another between the Des Plaines and the Chicago river near Chicago. The last two portages were extensively used by the French, and were very useful in giving access to the old Indian villages at Cahokia and Kaskaskia. At the opening of history, certain tribes were located on the rivers below the portage. The Illinois on the river which bears their name; the Miamis on the Wabash and Miami rivers; and the Shawnees, Wyandots, and Delawares on the rivers which flow into the Ohio in the State of Ohio.

2. These geographical features had an effect on tribal boundaries. The three states, Illinois, Indiana and Ohio mark the residences of three chief tribes of Indians. Buffalo was near the dividing line which separated the six nations of Iroquois from the three great tribes of the Algonquins. New York was the residence of the Iroquois. Pennsylvania was occupied by different Algonquin tribes, the Susquehannas being the most numerous.

Wisconsin was occupied by the Winnebagos and Michigan by the Pottowatomies. These five states, Ohio, Indiana, Illinois, Wisconsin, and Michigan, were the habitats of different tribes, the tribes being hemmed in by certain geographical features, mainly by the rivers and lakes which formed boundaries for them as well as for the later inhabitants. The present political divisions are remarkably conformed to physical boundaries and at the same time are quite similar to the old tribal residences and perhaps to the habitats of those aboriginal occupants called Mound-builders.

3. The effect of the geography of the country upon the Mound-builders is next to be considered. On this point we have to study the prehistoric earthworks as evidence. It is remarkable that there is such a correlation between the earthworks and the geographical features.

It is acknowledged by archæologists that the Mound-builders of the valley of the Ohio were quite different from the Mound-builders of New York state and the other localities which border on the Great Lakes. The dividing line between the massive works of the Ohio Mound-builders and those of the northern nations is supposed to be along the line of the watershed. The 41st parallel of latitude being situated on that watershed may be considered the dividing line, though the real line is between the 40th and 41st. Some have supposed that the old Mound-builders dwelt on the lower or southernmost terminal moraine

while the later hunter tribes dwelt on the upper or northern terminal moraine, and they have drawn conclusions as to the period of occupation of the older Mound-builders as if they had com-

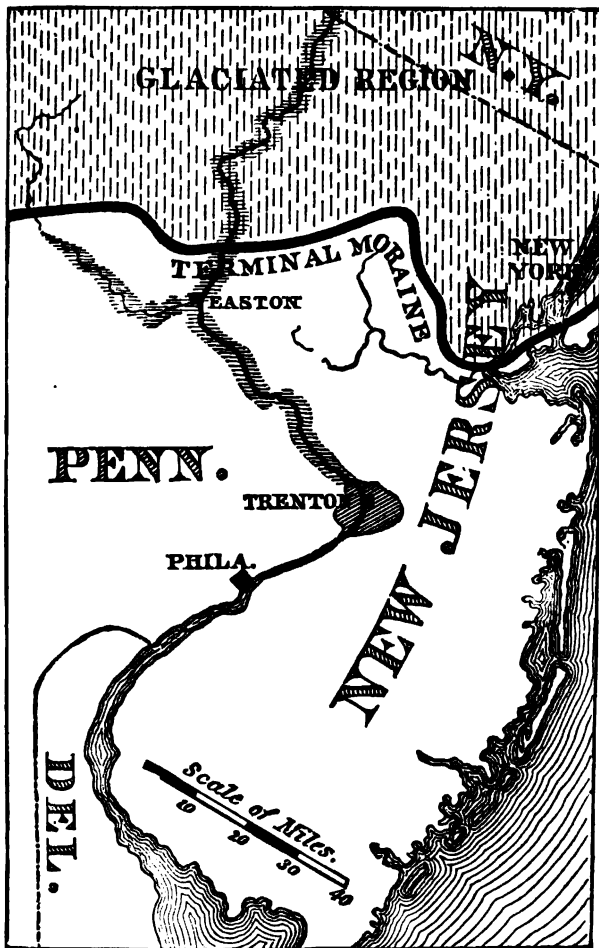


FIG. 3.

country subsequent to the Mound-builders; second, the people who built the mounds and earthworks of the Ohio valley; third, the paleolithic race who preceded the so-called Mound-builders and who may be supposed to have left their tokens in the gravel beds of this region,

4. The relation of the topography to paleolithic man. It might be expected that paleolithic relics would be numerous in this region, but up to the present date they are conspicuous by their absence. The nearest approach to the discovery of paleolithic man in this region is that for which Dr. C. C. Abbot

commenced their residences soon after the subsidence of the glacier from this region. This seems probable, but we should be more inclined to look for the traces of an earlier people than the Mound builders as the aboriginal occupants during this earliest period. The probability is that we shall find three classes of tokens; first, those of the later Indians who overran the

claims the credit. His finds were at the extremity of the same moraine, but they were on the Atlantic coast and not in the Mississippi valley. (Fig. 3.) Miss F. E. Babbit claims that she has

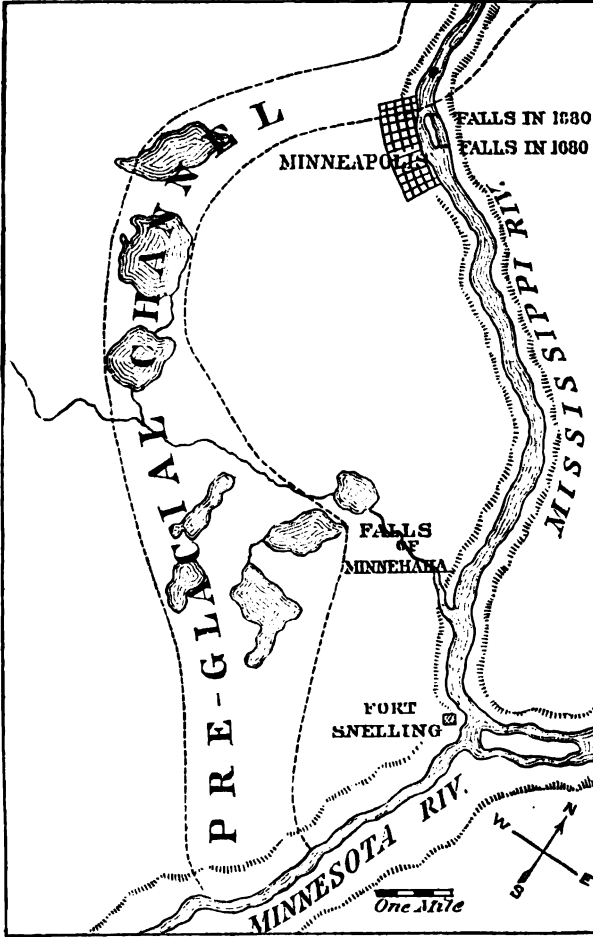


FIG. 4.

geography of the country. It is largely a matter of conjecture as to what direction the Indians followed in their migrations. Authors are divided on the subject. Some maintain that they all came from the Northwest, but some of them continued their migrations until they reached the Atlantic coast, and then there began to be reflex wave. The Delawares have a tradition that they migrated from the west in company with the Iroquois, and they came in contact with the Alleghewi, who were dwelling on the Ohio river, and overcame them. The Dakotas, on the contrary, have a tradition that their

found paleolithic relics in Minnesota. These finds were found, however, on the other side of the Mississippi river near River Falls. (Fig. 4.) The region which is contained between Buffalo and Chicago ought to yield a great many paleolithic relics, but so far none have been found.

III. Another evidence of the effect of geography upon the aboriginal history is shown by the condition of the Indian tribes.

1. Early migrations as affected by the

ancestors migrated from the East, and that they were the mound builders of Ohio. Certain writers, such as Judge C. C. Baldwin, maintain that the Dakota and Cherokee languages are similar, and other writers maintain that the Cherokees and the Alleghenians were the same people. Here then we have cross lines for migration, the Dakotas from the East and the Delawares from the West. The Delawares reached the Atlantic coast. The Dakotas are said to have come from the Atlantic coast. There is nothing in the geography of the country to contradict either of these traditions. Two great stocks of languages are represented by the Dakotas and the Delawares. The Iroquois differs from the Delawares, but is supposed to be somewhat akin to it. As to the other tribes, the Shawnees, Ottawas, Miamis, Mascoutens, they are all Algonquin. Mr. Horatio Hale says that "the evidence of language and to some extent that of tradition leads to the conclusion that the course of migration of the Indian tribes was from the Atlantic coast westward and southward. The Huron-Iroquois tribes had their pristine seat on the lower St. Lawrence. The traditions of the Algonquins seem to point to Hudson's Bay and the coast of Labrador. The Dakota stock had its oldest branch east of the Alleghenies and on the Carolina coast. Thus we have three points: the Hudson's Bay, for the Algonquins; the Ohio river, for the Dakotas; and the St. Lawrence, for the Iroquois. So far as the geography of this region is concerned, we should say that they were natural lines of migration. Of course, this does not settle the point as to the source of these tribes. We judge, however, that they migrated south, but cannot tell whether they entered the continent from the northeast or from the northwest. They may have come from both directions, one stock from Europe and the other from Asia.

2. As to the Mound-builders' migrations, we know little; but it seems plausible that they followed the same lines if they were not the same people. We quote Mr. Horatio Hale: "Every known fact favors the view that during a period which may be roughly estimated at between one and two thousand years ago, the Ohio valley was occupied by an industrious population of some Indian stock, which had attained a grade of civilization similar to that now held by the Village Indians of New Mexico and Arizona; that this population was assailed from the north by less civilized and more warlike tribes of Algonquins and Hurons, acting in a temporary league, similar to those alliances which Pontiac and Tecumseh afterwards rallied against the white colonists; that after a long and wasting war the assailants were victorious; the conquered people were in a great part exterminated; the survivors were either incorporated with the conquering tribes or fled southward and found refuge among the nations which possessed the regions lying between the Ohio valley and the

Gulf of Mexico; and that this mixture of races has largely modified the language, character, and usages of the Cherokee and Choctaw nations.

3. The location of the Indian tribes as related to the geography of the country. The Iroquois were situated in the state of New York. With lake Ontario and the St. Lawrence on the north, lake Champlain and the Hudson river on the east, the Alleghany mountains on the south, lake Erie and Niagara river on the west, they were as secure as if surrounded by a wall of adamant. The different tribes were located around the smaller lakes, which still bear their names—Cayuga, Seneca, etc. The power of the Iroquois was owing to their confederacy; but their confederacy was in part owing to their circumscribed limits as well as to kinship. After the advent of the whites the Iroquois adopted the use of firearms and so carried great dismay into the tribes of the interior. They were first conquerors over the Eries; next the Hurons came under their ban; after that the Illinois tribes were attacked by them. The Delawares and other tribes south of them were subjugated, made women as they called it, and sent over into Ohio for refuge and settlement. The Susquehanahs were always in conflict with them, but endured longer than the other tribes. It is interesting to study the old maps and see how rapidly the Iroquois territory grew under the patronage of the English and the power of firearms which they furnished them. First, New York State is Iroquois territory; second, Ohio is the place where they hunt buffalo, and Upper Canada is the place where they hunt beaver, third, the Illinois territory is claimed as belonging to the Iroquois by the right of conquest; last of all, the Iroquois land-claims extend on the English maps down both sides of the Mississippi river to its very mouth, leaving only the portions occupied by the Cherokees and Choctaws as land belonging to any other tribes. The history of the exploration of this region shows how rapidly the Iroquois extended their conquests: Champlain found the Iroquois in the state of New York, and the Hurons on the lake that bears their name. La Salle found the Iroquois in New York, but the Hurons were in deadly fear of them, and the Illinois were fleeing from the villages burned by them.

A little later the missionaries on Lake Superior found fugitives from all the western tribes, Miamis, Illinois and Kickapoos on Lake Superior, while the Hurons were in a hiding place on the Black River, and Wisconsin was the refuge for nearly all the tribes which had been dislodged by the Iroquois. The geography of the country will explain how this could be. There were stormy lakes, and open prairies, and long distances between the Iroquois and these hiding places, and yet, each tribe seemed anxious to place some other tribe between them and their deadly foes.



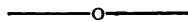
#### 4. Changes in the tribes will next be considered.

The war of 1812 marked an era in the history of the Mississippi valley. Four wars preceded it: That of 1750; the French and Indian war; Pontiac's conspiracy in 1760; the Revolutionary war in 1776, and the war in 1790. General George Washington lived through all four of these wars. He was associated with General Braddock in the first, was commander-in-chief in the third and was chief magistrate in the fourth. The history of these four wars from the aboriginal side has never been written. Great changes among the Indian tribes resulted from them. These were more powerful than geographical lines, but there were geographical questions which should be taken into the account.

The Delawares fled across the mountains and lodged in Ohio. The Hurons fled up the lakes and found refuge in Wisconsin. The Potowatomies fled across Lake Michigan and were found in eastern Wisconsin. The Foxes fled up the lakes to Green Bay, and then crossed the portage into the Wisconsin and down the Wisconsin to the mouth of the Rock. Pontiac gathered tribes from all this region down the lakes and up the rivers, and thought to hurl them upon the white settlers; but the war of 1760 settled that contest. The rendezvous was at Detroit, but the war was all along the borders. In the war of 1790 there was a rally of the Western tribes, but the geography is not so conspicuous as in the previous war.

The Ohio river is the line along which the native races seem to have migrated from time immemorial. We have given this brief sketch of the progress of events during prehistoric times. We have, first, the glacial period, at which time we suppose that there were no inhabitants in the region. Second, "paleolithic" man is supposed to have overran this valley. Third, the Mound-builders next came. The date of their coming and the length of their sojourn are unknown. There may have been several successive tribes or races of Mound-builders. Fourth, the Indians of Algonquin stock occupied the territory. The war of 1812 closed the aboriginal history.

*Peck. 4. 4*



#### SPOOL ORNAMENTS AND EAR-RINGS.

The discovery of spool ornaments by Prof. Putnam in the mounds of Ohio has brought up the question as to their object and use. It appears that they were very extensively used by the aboriginal tribes of America. (1) They seem to have been common among the Mound-builders, as spool ornaments resembling these have been found in Wisconsin, Illinois, and Tennessee as well as in Ohio. (2) Ear ornaments were common also among the Pueblo tribes, as every portrait of them shows. (3) Ear-rings were very prominent ornaments among the civilized tribes, such as the Aztecs, the Yucatecs and other tribes of

Central America. Ear ornaments were worn by the Peruvians, as every representation will prove. The unity of the American races cannot be proven by this circumstance, and yet the use of an ornament which was so similar in all parts of America would favor the idea of a common source. It does not seem probable all the races and tribes would come to this uniformity by a mere process of development, or by the exercise of a natural taste, and we are therefore led to ascribe it to a social contact and to the transmission of a custom. We trace the ornament back to prehistoric times and find that it was as common then as at the time of the discovery. The survival of a custom which was so universally observed impresses us as very strange, and we conclude that there must have been some religious motive at the basis of the whole practice.



FIG. 1.

The religious observance is the one which interests us. With this thought we present a series of engravings and call attention to three points—first, the practice was observed very extensively; second, the same ornaments were worn in the remote past, and third, that they were regarded as very sacred.

I. We first give the cuts, which show the extent of their use.



FIG. 2.

Some of these engravings have appeared in this magazine before, but we take them up at this time to illustrate the point before us. We give first the cut of a stone pipe (Fig. 1), which was found in Ohio. It is now in the possession of Mr. A. E. Douglass. It will be noticed that in the ears are objects which resemble the spool ornaments. Were we able to take a profile view, we would see that these ornaments protruded beyond the ear and that they evidently were spools, just such spools as are found among the mounds. This shows that they were used by the Mound-

builders. The second specimen (Figs. 2 and 3) which we present is a vase or jar, on which a grotesque and singular portrait of an old man was moulded. It was found in a deep cutting in the Mexican National railway and deposited in the Metropolitan Museum at New York by Dr. Robt. H. Lamborn. It is 12 inches



FIG. 3.

in height and a bright yellow ware exceedingly fine and smooth. Mr. E. A. Barber says of the specimen, "A noteworthy feature is the peculiar ring-shaped ear ornament, similar to those which occur in a clay mask from Central America and a unique stone pipe from Ohio, both of which are owned by Mr. Andrew E. Douglass, of New York City. There are specimens which we might present from Peru, and still others from the West Indies. If our readers will take the pains to look at the Smithsonian report for 1884, first part, and examine the sculptured faces from Guatemala, they will find these spool ornaments in five of the figures presented. In one of the figures is the portrait of an old man resembling the one just given from Mexico. In two of the figures there is another ornament which reminds us of the Mound-builders. The cap on the head resembles the pottery relic which is generally supposed to have been used for the purpose of moulding and smoothing the outside of the vases. This merely rests upon the top of the head as if it were intended for a symbol rather than a covering. It shows that the same relics were in use by different tribes and in different countries, and that the same rude utensils which were in common use among the primitive Mound-builders



FIG. 4.

afterward became into ornamental and symbolic and were worn as badges, very much as the compass and the square of the Masons are worn as the badges of their craft.

II. This brings us to the use of the spool ornament as a religious symbol in the prehistoric times.

Prof. Putnam informs us that these spools were found by him folded in the hands of the skeletons, or in such positions relative to the skeletons as to show that they were sacred. The same thing is proven by the sculptured images which have been found.

We present a cut (Fig. 4) of a Mound-builder's pipe. It will be noticed that there are two ornaments upon this pipe, one, the projection above, resembling a horn, and the other, a projection at the side which reminds us of an ear-ring or a spool. In



FIG. 5.

the next figure we find a rude idol which came from one of the Gulf States. (Fig. 5.) This has also the same projections, showing that they were symbols in that region though the imitation of them is quite imperfect. There is a figure of an idol or human face among the cuts described by Dr. Chas. Rau. It is a slab on which is a human head. The head is surrounded by knife blades, but on the head is a peaked cap which resembles the cap worn by the Calmucs, which is very close-fitting and runs to a point. Below the cap on either side of the face is a large ear with an ear-ring which reminds us of the spool ornaments of the Mound-builders. (Fig. 6.) This slab is from Tuspan, Mexico. This slab was evidently symbolic, as the knife blades plainly show. If there was any doubt as to the symbolic use of the ear-ring, we should say the next figure would dispel the doubt. (Fig. 7.) This is a picture of the sacrificial stone. The ear ornaments in two of the figures on this stone are very prominent. They were probably badges of office corresponding to the feather head-dress. It will be noticed, also, from examining the idol pillars at Copan that there are large projecting ears upon either side of the face in at least two of them, and although the ears have no spool ornaments in them, we judge that

blades plainly show. If there was any doubt as to the symbolic use of the ear-ring, we should say the next figure would dispel the doubt. (Fig. 7.) This is a picture of the sacrificial stone. The ear ornaments in two of the figures on this stone are very prominent. They were probably badges of office corresponding to the feather head-dress. It will be noticed, also, from examining the idol pillars at Copan that there are large projecting ears upon either side of the face in at least two of them, and although the ears have no spool ornaments in them, we judge that



FIG. 6.



the extension of the ears was on purpose to represent them as in a sense symbolic. These idol pillars may be seen in *THE ANTIQUARIAN*, Vol. VII., pages 204 and 206. These are all ancient specimens, and they show that this spool ornament was a sacred symbol among nearly all the native tribes in the prehistoric times.



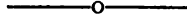
FIG. 7.



FIG. 8.

III. As to the religious significance of the spool ornament, we must acknowledge that we are in the dark. There is an idol, which was found in Mexico, in which the spool ornament is found in the ear, while serpents form the fringe of the garment. This figure (Fig. 8) is taken from Biart's history of the Aztecs, published by Jansen & McClurg. It is an idol representing death, called Miquiztli. It has a skull for a head, but on either side of this skull is a projecting ear with a spool ornament in the ear. The figure has also two round spots in the palms of the hands, which are held up and out as if to exhibit the spots. It is evident that there was something symbolic about the ear-ring in this idol. The statue was found near Tehuacan, Mexico. There is a statuette of terra-cotta in the museum of Trocadero, Paris, which was also found near Mexico, which has an ear ornament resembling this, but an elaborate head-dress in which the folds of a serpent seem to be placed above the head, and the mouth has a large ring representing projecting lips with the teeth in center of the

ring, as if the intention was to make both the ear and the mouth symbolic. This statuette is Quetzacoatl; the great divinity of the Mexicans. We have in this a hint of as to the significance of the ornament. It would seem as if the organs of sense were designed to represent personal attributes among the civilized races. Possibly the germ of this thought is to be recognized among the Mound-builders. The ear was the organ by which the soul could have intercourse with the outer world, and perhaps the ear ornament was preserved and placed along with the skeleton as a sign that the skeleton was to be visited by the soul. again. In that case the spool ornament would resemble the pieces of jade which were placed upon the tongue of the deceased among the Mexicans as a charm and as a sign so the spool may have been placed in the hands and near the heads of the Mound-builders as a sign.



## FRAUDULENT POTTERY RELICS.

NOTE BY THE EDITOR:—The drawings which were sent to the editor by Dr. Beecher, were sent to Mr. E. A. Barber and were by him presented to the members of the Numismatic and Antiquarian Society of Philadelphia for inspection, and were pronounced by all who saw them to be frauds. It is not at all strange that Dr. Beecher was deceived by these articles, especially as he had but a brief opportunity of studying them. There are pottery vases in the museums of Natural History in New York, about which the culators are somewhat doubtful. The peculiarity of this collection of pottery is, that it contains Egyptian symbols, mingled with Aztec figures, which of itself would be sufficient to arouse suspicion. The manufacture of fraudulent pottery is practiced extensively in Mexico, and amateur archæologists are likely to be deceived. We publish Dr. Beecher's letter so that our readers may understand the liability to be taken in by such collections unless they are especially careful in ascertaining their source. The skilled archæologists may perhaps detect the fraud, but it requires an eye well trained and a very considerable knowledge of ancient symbolism of Mexico and the native races as compared with that of other countries, and especially of the difference between ancient symbols and modern ornamentation.

## ETHNOLOGIC NOTES.

BY ALBERT S. GATSCHET, WASHINGTON, D. C.

CIVILIZATION OF ANCIENT AMERICA.—The long-expected continuation and end of Dr. Gustav Bruehl's work "*Culturvölker Alt-Amerikas*," commenced in 1875, has now appeared. The work, in its whole, forms a handsome and very instructive volume in octavo, containing a little over 500 close-printed pages (Benziger Brothers, publishers, New York and Cincinnati). Bruehl's dates are all based on a careful perusal of the Spanish-American historiographers, chroniclers and ethnographers; the enumeration of the aboriginal monuments in the first part of the volume gives us the most complete and accurate statistics we have ever seen of the subject, and is mainly based on the reports of recent travelers and investigators sent out by various governments. The cultured nations of America are the Mexicans, Mayas, Chibchas and Peruvians, and these are chiefly dealt with in the volume before us; but other American peoples, among which we perceive a mental development of no mean order, as the Pimas, Chiriquis and some South American tribes are also referred to in connection with their neighbors. The composition of the second part has been materially aided and advanced by the extensive voyages made by the author through Mexico, Yucatan and the southwest of the United States. His own active explorations and investigations are visible on almost every page, and the accounts of the civil and military life, the recital of the strange and weird superstitions then prevailing, forms highly instructive reading. As to the clan and kinship system, and the social organization of all the Indians described, Dr. Bruehl follows the results of the modern investigations now prevalent. To give an idea of the special contents of the volume, it may be said that no portion of ethnography is excluded with the exception of somatology, racial divisions and linguistics. Thus we have several chapters on stone monuments, graves and earthworks; a chapter on graphic means and pictographs, on chronology, culture heroes, culture myths, and centres of civilization, physical and mental qualities of the cultured Indians, their garments and attire, their food-production and system of land tenure, their arts and trades, architecture, commerce, fairs and markets, their social organization and customs regarding education, marriage, personal names, administration of laws and justice; their weapons, tactics and mode of warfare, religions and worship, and, last of all, their mode of disposal of the dead. A copious alphabetical index closes the volume. The German press of the United States has been unanimous in extolling the book in the most complimentary manner on its appearance.

NOKOMIS, the Ojibwe term for "my grandmother," is the name which Karl Knortz has given to a German collection of myths and legends gathered by various travelers among the North American Indians (Zurich, Verlagsmagazin, 1887, 121 pages, small octavo.) The number of Indian stories amounts to seventy-four, and among these we find many from the Central

Basin, coming from the Utes, Payutes and Shoshonis. The third volume of Powell's Contributions has furnished some referring to the California tribes, others are from Texan tribes, the Sioux or Dakota, the Ojibwe, the Five Nations and several Eastern Algonkin tribes. The larger number of the stories are nature and animal myths, and many of these, probably the most interesting ones, refer to the *creation* of the universe, the earth and the various objects of nature.

XIBALBA is the name of a legendary, or at least problematic ancient empire of Central America and of its capital city. The Popol Vuh contains a half mythic account of the wars sustained by the Quiche rulers against the Xibalba kings and their final triumph over them. Las Casas renders the name by *hell*, and D. de Landa translates Xibalba Okot, by: *ballet of the demons*. H. de Charencey, in a recent French treatise of fourteen octavo pages, examines the opinions of the former writers upon this enigmatic country. He thinks that it meant neither a nation nor a country, but a city, and that the name has to be resolved into the Maya words *xib*, *male*, *man*, and *baalba*, *domain*, *patrimony*. The inhabitants of this locality belonged to what he calls the civilization of the "Oriental Toltecs," or Floridians, who arrived in Central America by the Caribbean Sea, and seem to have been identical with the Xicalancas, "who reached there in the first century of our era, under the leadership of the first Quetzalcoatl, the emblem of priesthood and of the beginnings of civilization." Thus it seems that there is no means of escaping the mythic side of Xibalba in order to get a historic basis for this "air-castle".

THE AUSLAND, a German weekly periodical published in Stuttgart, continues to print original reports of travelers and navigators from all parts of the globe. The latest numbers contain: Riedel's account on the aborigines of Celebes or Topantunuas. Life of the employes of the Hudson's Bay Company. Sketches from Persia. C. Toeppen's journey to the interior of Africa. Ascent of Cloudy Mountain in New Guinea. A feast with King Jaja (Western Africa). The wild tribes of the Konkan, East Indies. The Gaucho of Argentina. Ivory trade. Siberia colonized by convicts. The Galapagos Archipelago. Grenfell's missionary travels through the wilds of Africa.

## NOTES FROM THE FAR EAST.

A Letter from an English Lady who has Traveled in India.

I cannot agree with Professor J. Avery as to "*Om mani padme num*" being a meaningless apostrophe. It may have a deep signification both for the Hindu followers of Saiva, and for the Buddhist. As Herr Koeppen observes, it is quite possible that this formula may have been of Saiva origin, for the agate egg in the centre of the singular brass object which I purchased in Benares—(the great stronghold of the Saiva sect) was to them one of the emblems of their religion.

In several districts in the Himalayas, now occupied by Buddhists, this sentence is found inscribed on hundreds of stones lying upon the numerous



*manis* by the wayside; I have found them in Lahout, in Spiti, and in Ludakh. Its applicability also to the supposed tooth of Buddha, at Kandy, struck me forcibly on hearing, when in Ceylon, that that precious relic *is kept within a golden lotus flower*, which is again enshrined beneath seven or eight golden coverings of a dome-like form—models in fact of a Buddhist tope or tumulus. With the votaries of that religion, Buddha is an abstract passive principle rather than a god, for they say he has attained Nirvana or perfect rest.

The probable Saiva origin of this sentence receives further confirmation in the termination of the name which Prof. J. A. very states certain learned northern Buddhist monks give to one of their mythical beings—for *Tward* or *Eshwara* (Lord of the world) is not an uncommon name for Saiva in southern India, where Vishnu also is very frequently represented as a blue man reclining on the folds of a snake, and from out the centre of his body issues the stem and the flower of the lotus, on which, born of the lotus flower, is a seated figure of Buddha the so-called ninth avatar or incarnation of Vishnu.

Certain dim traditions regarding the Hindu gods may still abide (in name) amongst the Buddhists of Western Thibet—Chinese Thibet is unapproachable to the European; but I am at a loss to understand Prof. J. A.'s statement that the *manis* or stone walls with the inscribed tablets are made by them "in fulfillment of some vow or to secure some boon *from the gods*" Does he mean to imply that Buddhists worship the Hindu gods—if so which?

On three different occasions I have spent some few weeks in Lahout, at a place where some German missionaries have lived for years, the people there are Buddhists with an intermixture of demon worship, and though Lahout is nearer to the plains than either Spiti or Ludakh they are not Hinduized as in the adjacent valley of Kulu. nor, as I have observed above, are they pure Buddhists, like the inhabitants of the former; but to give an instance of how various ideas may be adopted and adapted by primitive peoples, these gentlemen said that the natives of that valley not once, but many times, had told them that they believed Queen Victoria to be an incarnation of Durga, (one of the many names for the wife of Saiva), adding that Buddhism is shortly to be at an end, when our sovereign will be their protector.

The Buddhists have apparently borrowed from the Saivas, and the Vishnavas again from both; in different parts of Hindostan proper the same god or goddess appears with a different name and with certain different attributes; gods exist in the southern peninsula of India which are unknown in the central or the northern provinces. In the case under discussion, the Buddhists would seem to have adopted the Hindu idea, and to have placed the tooth of Buddha in the heart of the lotus flower instead of the piece of marble. The jewel to the Hindu is the oviform piece of agate, the jewel to the Buddhist is the tooth of Buddha.

Veytaux, Switzerland, Sept., 1887. HARRIET G. M. MURRAY-AYNSLEY.

8

## LITERARY NOTES.

## THE COMMUNISTIC SYSTEM.

This subject is now engaging the attention of ethnologists. Mr. L. H. Morgan in his "Ancient Society," has advanced the idea that the communistic system was universal among the tribes and races of America. Mr. Augustus F. Bandelier has taken up with the view and has carried it to great length. These authors both think that the communistic system existed among the civilized regions of America. It is owing to this system that the Pueblo houses were built. These houses were known to have contained at times a population of about 3,000; the communistic system being carried out by the whole colony, that is, the people had all things in common and drew from a common stock for their sustenance. It is supposed by these authors that the extensive ruins found in Guatemala and Honduras were the remains of ancient houses where the communistic system was also carried on. The so-called palaces of Uxmal and Palenque were communistic houses. Other authors have taken a contrary view. M. Desire Charnay has advocated with much plausibility that these ancient ruins were the remains of palaces and temples, and that they were surrounded by temporary habitations in which the common people dwelt. Mr. Horatio Hale holds that even the wild tribes dwelt in separate houses and provided for their families separately. This seems to have been the case, certainly, with the modern tribes of Indians. Mr. Francis Parkman lived among the Indians for a time and studied their habits, but he says nothing about the communistic system. Mr. W. L. Beauchamp in this number of the *ANTIQUARIAN* states positively that it did not exist among even the Iroquois. It is an interesting question, and one on which we shall seek for light. Of course, this thought of the communistic system differs from the one which relates to the clan or Gentile system. There is no contention in reference to that as we understand it. The clan system existed among all the tribes of America. It was modified by the customs of civilization which prevailed in Mexico, but probably existed even there. The clan system precludes property in severalty. We maintain that there was no such thing in America before it was introduced by white men. But there might be a clan organization and a tribal ownership of land without a communistic system of living. This is the point to consider. We have elsewhere maintained that the village system embodied the clan, and that the villages were only the centers at which the clan resided, while the territory which the clan claimed, extended to certain points around the villages. The tribe consisted in a combination of clans, and each tribe would embrace a number of villages, the tribal boundaries being definitely fixed. The lesson which we learn from Mr. Morgan is this, that there were certain duties and obligations which arose from the clan system. These were: first, the obligation to make a common defense; second, the obligation not to marry in the clan or gens; third, the obligation to establish a common burial place; fourth, the right of electing and deposing chiefs;

fifth, the right of bestowing names; sixth, the right of adopting strangers into the clan; seventh, the right of attending upon religious feasts and being represented in the tribal councils; eighth, the mutual rights of inheritance of the property of deceased members. All of these peculiarities may have belonged to the clan system, and the communistic mode of living exist or not, as the case might be. The contention does not radically effect the clan system, and the bulk of Mr. Morgan's work remains intact. It is a minor point and yet it is a point of considerable importance. Possibly tribes and races differ in reference to it.

BARTRAM AND JONES ON THE COMMUNISTIC SYSTEM.—The system of government among the southern Indians, Creeks, Cherokees, etc., was similar to that of the Iroquois. Every town or village was guarded as an independent nation or tribe having its own Mico, or Chief. In the soil and in the hunting privileges of the region each inhabitant had an equal right. Private property in habitations and in planting grounds was, however, conceded and respected. There was a public granery built and furnished by the common labor of the tribe, stored with corn, fruits, dried fish and smoked meat. The Mico alone had the disposal of the corn and fruits. Every tribe had its boundary lines, and each nation or confederacy its own recognized territorial limits. In villages the right of personal property was scrupulously observed. All that a man earned or fashioned by his individual labor and industry belonged to himself, and he could dispose of it according to the customs and usages of his people. Every town or community had a parcel of land in its vicinity set apart for agricultural purposes. This was called the town plantation, where every family or citizen had his parcel or lot. The entire plantation was simply a collection of lots, adjacent the one to the other, and all embraced in one general enclosure. All the inhabitants, as one family, devoted their attention to the preparation of the ground and the sowing of the seed. An overseer awakened the inhabitants at daybreak, assembled them in the public square, and by sunrise led them to the fields. "When the fruits of their labors are ripe and in fit order to gather in," says Mr. Bartram, "they all, on the same day, repair to the plantation; each gathers the produce of his own proper lot, brings it to town, and deposits it in his own crib, allotting a certain portion for the king's crib, which is called the king's crib, because its contents are at his disposal, though not his private property; but considered as the tribute or free contribution of the citizens of the state, at the disposal of the king.—*Antiquities of the Southern Indians*, by Chas. C. Jones, p. 51.

W. H. MOUND EXPLORATIONS.—The mound exploration which was conducted by the employes of the Peabody Museum, Dr. Charles L. Metz and Prof. F. W. Putnam, deserve mention for several reasons, namely, they were conducted in a most thorough and careful manner; second, they have resulted in some remarkable discoveries; third, the conclusions reached are not mere hasty generalizations, but are inferences from facts which have come under actual observation. These conclusions seem to be in some respects contradictory to those reached by Dr. Thomas, who is in charge of the mound explorations of the Ethnological Bureau, but the reasons are given by Prof. Putnam and so far no particulars are given by Dr. Thomas. These conclusions may be summed up as follows: First, the mounds of Ohio seem to have been occupied by more than one tribe or race of Indians; their skill in ornamentation

and in art were superior to any known to have prevailed among the later tribes; cremation was practiced by the mound builders of Ohio; fourth, the history of the later tribes has nothing to do with that of the earlier mound builders of this region; fifth, the migrations of the Indians during historic times are known, the migrations of mound builders have not yet been ascertained. About eighteen mounds were explored. These contained from one to seven altars. Also, a large number of "flues," or "timber tubes," or "post holes," also an immense quantity of ashes and 40,000 probes. Many shell shell rods, copper ornaments, etc., which had been thrown into the "fires upon the altars," evidently as "sacrifices" or "offerings," during an "important ceremony."

Eighteen graves were discovered, containing various relics and remains. The graves were not made alike. In some of them were no stones. In one of them was a carefully built wall made from flat stones "dry laid". In others flat stones were placed at the bottom. One was piled up with stones, 300 in number. Others were basin-shaped, carefully made of flat stones, and no uniformity was observed in the manner of burial, some of the skeletons being recumbent, others in a heap. One peculiarity of burial was, however noticed. Several skeletons held in the hand a spool or ear ornament made from copper, as if this was a very sacred talisman. In one case, eight of these ear ornaments were placed near the shoulder in a bunch, while an ear ornament was held in each hand.

"CREMATION" took place in these altars, as was proven by the discovery of the burial places where the remains of the persons cremated were deposited. Burnt human bones with bits of charcoal were found placed by the side of a body in a grave, which was situated within the same earth wall which contained the altars. This is supposed to prove cremation and burial. Beside the body in the grave were sea shells, spool ornaments, a copper pin, a wooden bead, and long flint knives.

**RELICS SECURED BY PEARBODY MUSEUM.**—The objects used in the last sun dance of the Sioux were secured by Miss Fletcher. Small terra-cotta "figurines" of men and women, ornaments of gold and silver and meteoric iron, dishes elaborately carved in stone, ornaments from shell, and thousands of perforated pearls, knives of obsidian, teeth and bones of various animals were gathered from the mounds of Ohio. These show that commerce in prehistoric times extended to the silver and copper mines of Lake Superior, to the mica mines of North Carolina, also as far as to the obsidian deposits of the Rocky Mountains, and to the home of marine shells on the Gulf of Mexico. They also show a skill in ornamentation unknown to the tribes of Indians dwelling in Ohio subsequent to the period of the discovery. There were added during the year 1886, the Buckland collection from graves in Peru and Ancon; also, 30 specimens of pottery from Piura, Peru; also, the McNeil collection of pottery, stone implements, carved metals from ancient graves in Chiriqui, South America.

The relics discovered by Dr. Stephen Bowers in a cave in the San Martin mountains, Los Angeles Co., Cal., are in this museum. These consist of 33 feather head-dresses, four to five feet long found in a basket; 45 whistles made from the tibiae of deer; also, 4 perforated stone hammers mounted on barberry handles and held fast by asphaltum; also, 14 notched and pointed

sticks. There were 9 baskets, 6x20 inches in diameter. The handles of the so-called hammers were very short and slender, and the opinion is that they were used either for throwing, as the African clubs were, or as the star-shaped stones in Peru were.

"Two Links" from the armour of the "Skeleton in Armour," described by the poet Longfellow. This was probably an Indian who lived near Fall River and who cut up some brass kettles and made an ornamental dress for himself. The "armour" had been sent to the museum at Copenhagen, and was supposed to be a "Northman," but the "brass tuns" have come back to disprove the position.

FAIRY RINGS.—Mr. T. P. Blunt read before the Carotic Find club, September, 1884, a paper on the "Fairy Rings." It appears that on a high sloping field where the pasture is poor and pale in color, irregular rings of a darker green are found which are formed by a species of fungi belonging to the *Oreades*. These fungi increase in size, throwing out their rings from a common center, and are interesting objects. The name "Fairy Rings" has been given to them—a name significant of Druids and their superstition. The *Oreads* were mountain nymphs, or elves, as the *Dryads* were oak or tree elves. It is supposed that the name "Fairy Rings" arose from the appearance of the fungi, which, under a glancing moon, might be taken for fairies pirouetting in a mystic circle, which from time immemorial has been counted with the rites of religion.

PRE-HISTORIC TREPHINING.—In the year 1868 M. Prunieres discovered a skull in a dolmen which had been mutilated, and thought he had discovered one of the drinking cups with which the Gauls used to celebrate their victories. Dr. Paul Broca, after considerable study, concluded that these mutilated skulls were caused by the trephining of infants to cure epilepsy, and that amulets were sawed out as charms to prevent similar diseases. In 1887 Mr. Victor Horsley delivered a lecture on "Brain Surgery in the Stone Age," in which he differed from Dr. Broca. Dr. Robert Fletcher has an article in the contributions to North American Ethnology, Vol. 5, in which he says that the habit of trephining exists in the South Sea islands, which are still in the stone age. Here a notion prevails that headache is caused by pressure of the skull on the brain, and the habit of scraping the cranium was the result. This, however, does not quite explain the use of the amulets. Perforated skulls have been found in France, Belgium, Russia, Denmark, Poland, Portugal, Algeria, Peru, and the United States.

Dr. Broca thinks that it was the result of a superstition about the spirit of disease, and that the amulets were charms against the spirit. The geographical range of the custom is significant. Many religious ceremonies may be traced back to heathen superstitions and prehistoric times, but this religious right may be regarded as one of the earliest and the most widely distributed, though it is not certain that it can be traced to any one center. The transmission of the custom cannot be proven. Some have supposed that the priestly tonsure came from the custom of trephining. This is uncertain. The notion among the aborigines of America is that the soul is to be let out from the skull, and that a tangible mode of exit must be made.

Among some races, the soul, once departed, is forbidden to return, lest the deceased should appear as a wandering ghost, and with this idea all the

natural vents in the body are securely closed, the mouth being tied together with strong cords; and perhaps this was the reason for filling the skulls, which had been mutilated by cutting away amulets, with earth, and placing therein the amulet probably worn during life to protect the exposed brain, as pieces of cocoanut shell are now worn in the South Sea Islands. Among other races, as we have seen, free entrance and exit are provided for, by a hole in the tomb as well as a hole in the skull, but in both cases a distinct belief in spirits is expressed, though in different ways.

**A NEW ZODIAC.**—In the temple of Mithras, recently exhumed at Ostia, was found a Zodiac, but in which the twelve signs are represented in a novel manner, entirely differing from the normal succession of the months and seasons.

At Cucuteni, among a late find of clay vessels and utensils, silver and bronze rings and knives, bones, etc., were discovered a number of clay idols.

**BRASS KETTLE FOUND IN A MOUND.**—Some time ago an old farmer living near the Illinois river, on Bee creek, while plowing over an ancient mound that stood in the field, struck something that injured the point of his plow. Several times had this happened and the old gentlemen determined to remove the obstacle. Commencing to dig on the top of the mound the stone was soon brought to view, and proved to be a large flat slab of limestone, which, on being shoved from its place, revealed a vault in which lay the dust of a skeleton. On one side lay an enormous stone axe of splendid workmanship and weighing nearly fifteen pounds. There were a large number of arrow and spear points, with some strangely worked stones, the use of which it were difficult to even guess. But the most remarkable thing this old tomb contained is a singular vessel made of copper and of size to hold nearly two quarts. The vessel has a nicely fitting cover, and is hammered together with the most exquisite skill. Wrapped around the vessel of copper is a mass of fabric, woven or knitted of different material. The vessel, when lifted out from its place in the matting, is seen to be much eaten away by oxidization, but is in fair condition. On the top of the copper is riveted a bent piece of copper, in which is riveted a stout copper ring. This curious vessel contained, besides some dust, three curious stones all highly polished, one blue, like opal, one dark green and of obsidian, one reddish of jasper. These stones are nearly egg-shaped, being more pointed at each end.

The old farmer and his men, excited by the discovery of these curious objects, continued excavating in the mound, which was about ten feet in height, and at the base of the work came upon another structure of stone, which being opened disclosed, perhaps, the real mound builder. The skeleton was much decayed and crumbled on exposure, but from the number of fine implements found by his side must have been the grand sachem of his day. The implements were as follows: A pipe of stone, on which is carved an expressive human face; a splendid copper axe, weighing nearly a pound; three copper spears, nearly a foot in length and an inch in the middle; the remains of what was a copper breast-ornament; a string of 86 copper beads, of various patterns. A curious copper implement or ornament, made to resemble that singular bone found only in the male coon; a mass of native copper apparently not designed to represent an object; an amulet of stone made to represent some four-legged animal; also a number of stones wrought for various purposes.

## BOOK REVIEWS.

*Twentieth Annual Report of the Peabody Museum*, Vol. 3, No. 7, Cambridge, 1887.

This report contains a summary of the explorations made under the auspices of the society during the years 1885 and 1886 as follows: 1st, In Nicaragua and Costa Rica under Dr. Earl Flint. 2nd, In the gravel beds of New Jersey, by Dr. C. C. Abbot. 3rd, The shell heaps of Maine, under Prof. F. W. Putnam. 4th, Ethnological studies among the Omahas' and Sioux, by Miss Alice C. Fletcher. 5th, Among the mounds of Ohio, by Dr. Chas. L. Metz and Prof. F. W. Putnam.

As a result of Dr. Flint's explorations the following relics were discovered. 1st, A number of specimens of jade identical with Chinese jade, supposed to prove either traffic or migration from Asia. 2nd, Earthen vessels from mounds, and inscriptions in caves. 3rd, Human footprints in volcanic tufa, 10 feet below the surface, near Lake Managua, supposed to prove the extreme antiquity of man in America.

Three successive periods of occupation in the Delaware valley are supposed to be proven by Dr. Abbott's exploration, that connected with glacial gravels, that perhaps identical with Mound Builders, and that of later Indian tribes. The shell heaps at Damariscotta, Maine, explored, were 30 feet high and several hundred feet long.

*Iowa Historical Record*, July, 1887. *Article on Geography and Early American History*, by A. B. Hinsdale. Dates in Geography and Early American History.

Cartier discovered the St. Lawrence in 1534. In 1613 Champlain traversed Lake Ontario, and reached Lake Huron. In 1639 Jean Nicolet visited the Winnebago Indians at Green Bay. In 1659 Catholic missions on Lake Superior. In 1669 Joliet went in search of copper to Lake Superior, returning he passed along the north shore of Lake Erie. LaSalle discovered the Ohio in 1670. Joliet and Marquette reached the Mississippi in 1673. Hennepin ascended the Mississippi river in 1682. Detroit was occupied by the French in 1701. In 1750 Washington took his journey from Pittsburg to Lake Erie. The French had occupied all of the Northwest Territory up to this period.

*Papers of the American Historical Association. The Louisiana Purchase in its Influence upon the American System*, By Rt. Rev. C. F. ROBERTSON, D.D.

The session of the vast territory west of the Mississippi was an accident. The main object was to secure a passage through and out of the Mississippi river. In 1804 Meriwether Lewis and Wm. Clark started to explore the Missouri river, to cross the Rocky Mountains and to follow the Columbia river to its mouth. In 1805 Capt. Zebulon Pike started up the Mississippi to discover its source. He reached the headwaters of the St. Peters. In 1806 he went up the Missouri river and the Osage, crossed the Red into

**Arkansas.** In 1819 Maj. Long went up the Missouri river to the edge of the Rocky Mountains, and the same year Mr. Henry Schoolcraft reached the sources of the Mississippi river and discovered Itasca Lake. These explorations were all subsequent to the Revolutionary war, and most of them subsequent to the war of 1812. In 1819 negotiations were on foot for the purchase of Texas, which culminated in the Mexican war in 1849, when California was added to the territory.

*Papers of the American Historical Association, Vol. I, No. 3, History and Management of Land Grants for Education in the Northwest Territory—Ohio, Indiana, Illinois, and Wisconsin—by George W. Knight, Ph. D.*

In 1784 a bill for ascertaining the mode of locating and disposing of lands in the western territory was reported to Congress. In 1786 the Ohio company was formed. In 1786 the Northwest Territory was organized. One of the articles declared that religion, morality and knowledge being necessary to good government and happiness of mankind, schools and the means of education shall forever be encouraged. This was due to the influence of Dr. Manassah Cutler. In the same year the Symmes purchase was made. In 1804 there were three land districts in the territory of Indiana—Vincennes, Kaskaskia, and Detroit. In 1800 Ohio became a state. In 1805 the Indians relinquished their claims upon the last of the Connecticut reserve. During the same year the Detroit land district became the territory of Michigan. The Kaskaskia district became the Territory of Illinois four years later, leaving the Vincennes district to comprise the territory of Indiana, which became a state in 1815. In 1836 Wisconsin was detached from Michigan and became a territory. Section 16 in all the townships of the different states was set apart for school purposes by the ordinance of 1787. John Cleaves Symmes contracted that one township was to be set apart for a seminary of learning. In 1792 this was secured by law and Oxford was chosen. In 1804 a seminary of learning was founded in Kaskaskia land district. In 1809 the Miami University was chartered. In 1806 Vincennes University was established. In 1817 three sections of land were granted to the college at Detroit, but in 1821 the "Catholepistemiad, or University of Michigania," became the University of Michigan. In Wisconsin seventy-two sections were set aside in 1838 to the University of the Territory of Wisconsin, which became established at Madison in 1848. Thus we have twenty-seven colleges or universities established as a result of lands reserved by the different territories before they became states. The dates of the charters for the universities can be compared with the dates of the admission and will be found as follows: Oxford, 1792; Ohio admitted in 1800. Vincennes, 1806; Indiana admitted in 1816. Detroit, 1817; Michigan admitted in 1837. Wisconsin University, 1838; Wisconsin admitted in 1848. Illinois did not secure land for a university until she became a state in 1848, and the funds for this did not become available until 1857, when the State Normal school was established.

*Ohio and Archaeological and Historical Quarterly.* Vol. 1, June, 1887, No. 1. Columbus; 110 pp.

A very attractive volume and an interesting table of contents. Among the articles are the following:

The beginnings of the Colonial system of the United States, by I. W. Andrews. The Ordinance of 1787, by Wm. P. Cutler. Origin of the Ohio



company: Petition of officers in the continental line of the army. Henry B. Curtis: A memorial address, by A. R. McIntyre. Importance of the study of Archæology in Ohio, by G. F. Wright. The proper method of exploring an earthwork. Aboriginal history of Butler county, by J. P. McLean. Bibliography of the earthworks of Ohio, by Mrs. Cyrus Thomas. The Society and the Quarterly, by Geo. W. Knight. Proceedings of the Society for 1885. Book Notes.

We congratulate the citizens of Ohio on having so able a quarterly. It is now nearly thirty years since the Philosophical Society was established at Cincinnati, and twenty years since the Northern Ohio Historical Society was established, but no regular journal has been published, the nearest to a periodical being *The Firelands Historical Magazine*. Whether Ohio is likely to sustain a periodical as expensive as this, remains to be seen. There was a time when a State Archæological Society existed in Ohio. It was established in 1876, and a very interesting exhibit was made by it at the Centennial, Col. C. Whittlesey and Prof. M. C. Read being the committee. The report of the Archeological exhibit was published by the State, and is very valuable, now especially, as it is nearly out of print, and the cuts which were used to illustrate it have unfortunately been destroyed by fire. A pamphlet was also published by this Society, containing the address by Rev. S. D. Peet and an account of the organization and proceedings of the first meeting. This is the Society to which Gen. Brinkerhoff refers in his paper in the *Quarterly*, and of which Prof. J. T. Short afterward became the secretary. It always takes personal enthusiasm and persistent devotion to it on the part of some one individual to make any society successful, and it may be said that the removal of one member and the death of another were the causes of the extinction of this society, which at first promised so well. The Western Reserve Historical Society has, however, published some very valuable tracts, mainly as the result of the persistent industry of Colonel Whittlesey, combined with the business energy of Judge C. C. Baldwin.

Our conclusion is that a different method of conducting archæological studies in this country is needed. Each locality has a little circle of workers, many of them beginners, but each circle is very anxious to start a periodical and to gather in to it contributions from the whole country. The result is that no periodical can be sustained. In our humble opinion, it would be a much better plan to establish State Societies, and then get the legislatures to publish the annual reports of these societies, confining the report to work done by specialists in the State, and not attempting to draw from other States for contributions; in other words, to make the report a representative of the scholarship of the State as well as of the material found within the bounds of the State. This plan has been adopted and carried out successfully in Wisconsin, in Kansas, in Michigan, in Minnesota, much to the credit of the citizens living in these commonwealths. The State of Ohio, however, has three prominent centers and four historical societies, and it remains to be seen whether the citizens will combine on one society and sustain it. There is no demand for more journals, but there is a demand for thorough work and for published local and state reports.

*Hours with the Bible, or the Scriptures in the Light of Modern Discovery and Knowledge*, BY CUNNINGHAM GEIKIE, D. D., with illustrations. New York, James Pott & Co., publishers, 1887.

This work is too well known to need a review from us, but we shall speak of the points which will interest antiquarian readers. First we notice that the early chapters are devoted to the general discussion of antiquarian subjects as follows: "Ancient Ideas of God," "Ancient Legends of Creation," "The Age of the World," "The Antiquity of Man," "The Origin of Man," "His Primitive Condition," "The Story of Eden," "The Flood," "After the Flood," "The Table of Nations," "First Glimpses of National History," "The Migration of Abraham," &c.

The author is conservative on all these points. He does not fall into speculations about the books of Genesis as some of the Germans do. He says, "it is impossible for us to realize the greatness of the addition made to the religious knowledge of mankind by even the first chapter of scripture." He draws the distinction between personality in God and a God with moral attributes, and says that "the God of Moses stands in the strongest contrast with all other conceptions of the divine being." "Nor is it possible to explain on merely historical grounds how the Hebrews first obtained and so persistently clung to this grand first truth. Reference to a primitive religious instinct in mankind is not satisfactory. Traces of primitive revelation seem still to have lingered in the populations." He recognizes primeval traditions in the old Chaldean records the same as Lenormant does, and refers to the tablets which contain these traditions. He does not, however, undertake to explain the relation of the historic to the prehistoric world. He leaves that point for specialists to discuss. There is a chapter given to Genesis and geology and another to the age of man upon the earth. He takes history as evidence and does not allow much more than 7,000 years. He refers, however, to the traditions of the serpent and the sacred tree as confirmatory of Genesis but does not undertake to further explain Genesis by prehistoric science. He reviews the different opinions as to the location of the Garden of Eden, but he leaves out of the account the more recent theories in reference to the mountains of Thibet or of the North pole being the location. As to the extent of the flood, he denies the universality of it, but does not undertake to say at what point the ark landed, or from what point the migration of the races set out. On this subject there are writers which are more advanced than Dr. Geikie and who are perhaps as well acquainted with more recent investigations but "a peoples hand book to the Bible" does not need to contain speculations or uncertain theories on such subjects.

*How We Got Our Bible*, By J. PATTERSON SMYTHE, A. B. LL. B. London, Samuel Bagster & Sons. New York, John Wiley & Sons.

Three different classes of writings are relied upon as the material from which bible translators must draw, first: Biblical manuscripts in the shape of faded parchments with square lettering containing copies of the original languages. Second: Ancient versions such as the Syriac translations, etc. Third: The writings of the ancient fathers. Of the manuscripts the chief are the Vatican, the Sinaitic and the Alexandrian, the Palimpsest—called Codex of Ephraem—and the Uncials about one hundred in number. The Vatican manuscript has been known for nearly 500 years. The Sinaitic was discov-

ered in 1844. The Alexandrian arrived in England in 1628. These are the chief authorities of the versions the Syriac which was in use fifty years after the New Testament was written. The Latin Vulgate which was prepared by St. Jerome towards the end of the 4th century. Of the early christian writers we have the epistle of Barnabas; the epistle by Clement; the shepherd of Hermas; Polycarp's epistles; and apologies by Justin Martyr. These date back so near to times of Christ as to be called apocryphal books.

It is said that if the New Testament should be destroyed, yet there are quotations enough in the writings of the early fathers to restore it completely. This little book treats briefly of these subjects. It also refers to the different English versions, such as Wycliffe's, 1378; Tindale's, 1524; Coverdale's, 1535; The Genevan, 1560, and The Bishop's Bible, in 1568. Specimens of the type used in these Bibles are given in the book. It is an excellent hand book, and will be sought for by all who want to know about the different manuscripts and versions.

*Old Testament Characters*, By CUNNINGHAM GEIKIE, D. D. James Pott & Co., New York, 1886, 484 pages.

The study of Old Testament characters in the light of Archaeology and ancient history is the object set before the author in this book, and he has succeeded in throwing into the narrative many new and interesting facts. It is composed of a series of short essays or chapters containing pen portraits of nearly all the prominent characters of the Bible. Jezebel, the wife of Ahab, is portrayed in vivid colors. We should have been glad to have learned a little more about Baal worship, but the character of the daughter of a priest of Baal illustrates the point, for "by their fruits ye shall know them." The Jewish worship never produced such a character as Jezebel, but it did produce such women as Ruth, the Moabitess, and Esther, the beautiful queen. Bible writers seem to dwell upon the contrasts as if to commend the religion which had been handed down from the fathers by such shining marks. We occasionally find in history such contrasts, but here we have the cause. The different characters are owing to the different faiths or religious beliefs.

*Biblical Topography*, by REV. GEORGE RAWLINSON, M. A. New York. James Pott & Co.; 1887. 141 pages.

The points considered in this little book are, first, The site of Paradise; second, The Early Cities of Babylonia; third, The Chief Cities of Ancient Assyria; fourth, Elam its Chief City and its Chief River; fifth, Cities Connected with the History of Abraham; sixth, Egyptian Sites Zoan, Pythom, Memphis, Thebes, Migdol, Syene.

The treatment of the subject is of a popular cast, including the arguments pro and con for the location of Eden and a resume of the latest views and discoveries in reference to the cities and geographical localities mentioned in the Bible. Much of the same material may be found in the large works on the history of the different countries, and considerable new material which has not found its way into this book may be found in the various journals which treat of the Archaeology of the East, still the book is a great aid to the Bible student, and will be sought for eagerly on account of the reputation of the writer. It is neatly printed. It is attractive and cheap.

*Japanese Houses and their Surroundings*, By EDWARD S. MORSE, with illustrations Boston: Ticknor & Co., 1886.

Prof. Morse is a free hand draughtsman. He also improved his opportunity while a resident in Japan to make draughts of the houses which came under his observation. The book called *Japanese Houses* is the result. It contains, first, a description of the house in general, next a chapter on different types of houses, two chapters on interiors, a chapter on entrances and approaches, one on gardens, one on ancient houses, and another on the house of the Aruc.

It is a monogram devoted to the house, but a monogram which shows the draughtsman much more than it does the archæologist.

The last two are the chapters in which we find the archæology of the author to appear.

We are told that in Japan the house is developed from the primitive hut, and without the introduction or intrusion of foreign architecture. If the author could have shown us how the development had occurred, and could have told us what parts had survived from the primitive times, we should have been grateful.

The modern Japanese house is suggestive of the earlier forms. Possibly we shall yet learn about the ideas which ruled the earlier forms, and ascertain how the changes occurred.

One thing we do learn, however—the Japanese have not advanced much in invention, for their tools are of the most primitive kind and most inconvenient, as they have no bench or vice, and in fact none of the labor-saving machinery by which house building in other countries is conducted. The book is an attractive one and will doubtless be sought for on account of its artistic character. It will be prized by those who are devoted to industrial art and may also suggest some things in the line of house decoration.

*The Camelot Classics*—Great English Painters, arranged and edited by Wm.

SHARP. London: Walter Scott; New York: Thos. Whittaker. Price 50c.

*The Camelot Classics*, edited by Ernest Rhys—Malory's King Arthur. Ibid. Price 50c.

These books are marvels of cheapness. They each contain about 350 pages, printed in good type on tinted paper, bound in muslin.

The subject matter differs, but they are standard works. The style of Malory's King Arthur reminds one of that of Chaucer. It was, in fact, written during the fifteenth century, and bears the stamp of the age.

The transition is easy from the History of Arthur to the History of Early English Painters, for the very reason that some of these painters, like Holbein, lived and died during the same century with Malory, and both painting and poetry were then just passing out from their bondage into liberty, the triumphs of the sixteenth century following upon the efforts of the fifteenth. In matter and in manner we should say that the two works were worthy of consideration.

*Jewish Artizan Life*—The Times of Jesus according to the oldest sources, by

FRANZ DELITZSCH, D. D. Translated by Rev. B. Pick, Ph. D. New York, Funke & Wagnalls.

*Winter in India*, By the Right Hon. W. E. BAXTER, M. P. New York: Funke & Wagnalls.

A description of Artizan Life by the distinguished German archæologist,

Delitzsch, would naturally interest our readers, were the subject carried out from an archæological standpoint. The author has, however, drawn heavily from Rabbinic sources and from the documentary records of the Jewish writings. The quotations are, however, scholarly and reliable. The first part of the work is also very suggestive as well as interesting reading.

The description of a winter in India is a very different kind of a book, as it is a narrative of experiences and of personal observations during a brief sojourn in the East. "There are said to be 5000 temples and 350 mosques at Benares. One of the former is tenanted solely by Monkeys." This quotation will show the style of the work. Our readers will find it entertaining and will find many things to gratify their archæological tastes and ideas in it.

Both works are archæological in their character, but from different standpoints and in great contrast.

*Comparative Vocabulary of Algonquin Dialects.* From Heckewelder's Manuscripts in the Collections of the American Philosophical Society. Philadelphia; 7 pp.

*A Prairie Tragedy: The Fate of Thomas Simpson, the Arctic Explorer,* by Alex. McArthur, Ex-president. 13 pp.

*Manitoba Historical and Scientific Society. Winnipeg.* Annual Report for the Year 1886-7. Annual Meeting, Feb. 1, '87. Honorary, Corresponding and Life Members: The Executive Council for 1887 and its Committees; List of Donations. 12 pp.

*No 22. The Chinook Winds and other Climatic Conditions of the Northwest,* by A. Bowerman, M. A., Principal of Collegiate Department Winnipeg Public Schools. 6 pp.

*No 54. The Souris Country—Its Monuments, Mounds, Forts and Rivers.* By George Bryce, LL. D., Professor in Manitoba College, and President of the Historical Society, Winnipeg. 7 pp.

*No. 25. Our Winter Birds.* By Mr. Alex. McArthur, Ex-president. 12 pp.

*No. 27. The Footsteps of Time in the Red River Valley,* with special reference to the salt springs and flowing wells to be found in it. By A. McCharles, Chairman Archæological Committee. 18 pp.

*No. 23. The French Element in the Canadian Northwest.* By Lewis Drummond, Priest of the Society of Jesus. 14 pp.

*No. 29. Some Red River Settlement History.* By Charles N. Bell, F. R. G. S., Honorary Corresponding Member Buffalo Historical Society, Chicago Academy of Science, Hamilton Association, Scottish Geographical Society, &c, 8 pp.

*A List of the Mammals of Manitoba.* By Ernest E. Thompson. 26 pp.

These are all papers published by the Historic and Scientific Society of Manitoba. They show much activity and ability.

*Address Delivered before the Confederate Survivors' Association,* at the Quarterly Meeting in Augusta, Georgia, Aug. 2d, 1887, by Col. Chas. C. Jones, Jr., LL. D., President of the Association.

## BOOKS RECEIVED.

*Zeisberger's Indian Dictionary. English, German, Iroquois—the Onondaga and Algonquin—the Delaware.*—Printed from the Original Manuscript in Harvard College Library, Cambridge. John Wilson & Son, publishers; 1887.

*La Potru de la Valle Da Mississippi*, par M. Le Marquis De Nadaillac. Paris, Ch. Reinwald, Libraire, 15 Rue des Saints-Peres, 15; 1887. Matenaux pour L'Histoire Primitive, E. N. Naturelle Del'homme Revue Mensuelle Illustree. FoLdce Par. M. G. De Mortillet, 1865-18868, dirigee par E. Cartailhac et E. Chautre.

*Old Testament Characters*, by Cunningham Geikie, D. D., with seventy-two illustrations, Chronological Tables, and an Index. New York, James Pott & Co., publishers; 1886.

*Biblical Typography*, by Rev. George Rawlinson, M. A. Canon Residentiary of Canterbury, and Canean Prossessor of Ancient History in the University of Oxford. New York, James Pott & Co., publishers; 1887.

*Conventionalism in Ancient American Art*, by F. W. Putnam, Curator of the Peabody Museum of American Archæology and Ethnology, Cambridge, Mass. Printed at the Salem Press; 1887.

*Critical Remarks on the Editions of Diego de Landa's Writings*, by Daniel G. Brinton, M. D. Read before the American Philosophical Society, June 7, 1887.

*Ancient Nahuatl Poetry*, containing the Nahuatl Text of XXVII Ancient Mexican Poems, with a Translation, Introduction, Notes and Vocabulary, by Daniel G. Brinton, A. M., M. D., Philadelphia. D. G. Brinton, publisher; 1887.

*Fragmentary Records of Jesus of Nazareth*. From the Letters of a Contemporary, by Frederick R. Wyman, A. M., Canon of Christ Church and Incumbent of St. Matthew's, Dublin—London. Hodder & Stoughton; 1887.

*The Science of Thought*, by Max Muller. No Reason Without Language. No Language Without Reason. Vol. II. New York. Chas. Scribner's Sons, publishers; 1887.

---

 LIST OF EXCHANGES.

## EXCHANGES—ACADEMIES.

ACADEMIES OF SCIENCE.—Peabody Museum, Cambridge, Mass.; Geological Survey of Indiana; Geological Survey of Minnesota; Geological Survey of Missouri; Geological and Natural History Survey of Canada; American Antiquarian Society, Worcester, Mass.; Davenport Academy of Science, Davenport, Iowa; Academy of Science, Philadelphia, Pa.; Academy of Science, San Francisco, Cal.; Academy of Science, New York, N. Y.; Academy of Science, New Haven, Conn.; Essex Institute, Salem, Mass.; Society of Natural History, Cincinnati; Academy of Science, Buffalo, N. Y.; American Oriental Society, New Haven, Conn.; American Philosophical Society, Philadelphia; Boston Society of Natural History, Boston; Academy of Science, St.

© LIBRARY ©  
—OF—  
**Aboriginal American Literature.**

GENERAL EDITOR AND PUBLISHER:

**D. G. BRINTON, M. D.,**

**115 South 7th St., PHILADELPHIA.**

The aim of this series of publications is to put within the reach of scholars authentic materials for the study of the languages and culture of the native races of America. Each work is the production of the native mind, and is printed in the original tongue, with a translation and notes, and only such are selected as have some intrinsic historical or ethnological importance. The volumes of the series are sold separately, at the prices named.

**NOW READY.**

**No. I. THE CHRONICLES OF THE MAYAS.**

Edited by DANIEL G. BRINTON, M. D.

Cloth, uncut, \$5.00.

This volume contains five brief chronicles in the Maya language of Yucatan, written shortly after the Conquest, and carrying the history of that people back many centuries. To these is added a history of the Conquest, written in his native tongue, by a Maya Chief, in 1562. The texts are preceded by an introduction on the history of the Mayas; their language, calendar, numeral system, etc.; and a vocabulary is added at the close.

**No. II. THE IROQUOIS BOOK OF RITES.**

Edited by HORATIO HALE.

Cloth, uncut, \$3.00.

This work contains, in the Mohawk and Onondaga languages, the speeches, songs and rituals with which a deceased chief was lamented and his successor installed in office. It may be said to throw a distinct light on the authentic history of Northern America to a period fifty years earlier than the era of Columbus. The introduction treats of the ethnology and history of the Huron-Iroquois. A map, notes and a glossary complete the work.

**No. III. THE COMEDY-BALLET OF GÜEGÜENCE.**

Edited by DANIEL G. BRINTON, M. D. Cloth, uncut, \$2.50.

A curious and unique specimen of the native comic dances, with dialogues, called *bailes*, formerly common in Central America. It is in the mixed Nahuatl-Spanish jargon of Nicaragua, and shows distinctive features of native authorship. The introduction treats of the ethnology of Nicaragua, and the local dialects, musical instruments, and dramatic representations. A map and a number of illustrations are added.

**No. IV. A MIGRATION LEGEND of the CREEK INDIANS**

By A. S. GATSCHET. 251 Pages. Cloth, uncut, \$3.00.

This learned work offers a complete survey of the ethnology of the native tribes of the Gulf States. The strange myth or legend told to Gov. Oglethorpe, in 1732, by the Creeks, is given in the original, with an introduction and commentary.

**No. V. THE LENAPE AND THEIR LEGENDS.**

By D. G. BRINTON.

Price, Cloth, \$3.00.

The extraordinary WALAM OLU' or RED SCORE of the Delawareans is the basis of this work. The complete original text is given, with its 184 pictographs, a new translation, vocabulary, notes, and a long introduction on the Lenape, their legends, myths, customs, history and language. Much of it is from unpublished and original sources.

Vol. IX.

JANUARY 1887.

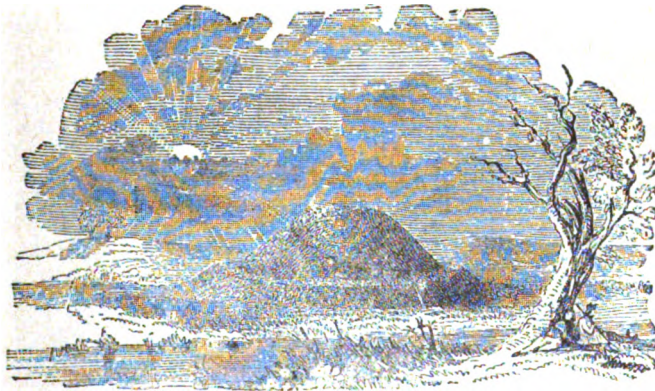
No. 1.

The  
American Antiquarian  
and  
Oriental Journal.

---

EDITED BY  
**REV. STEPHEN D. PEET.**

---



---

Published by  
F. H. REVELL, 150 MADISON ST., CHICAGO, ILL.

BI-MONTHLY.

Terms, \$4.00 per Annum.

---

(Entered at the Post Office, Chicago, Ill., as second-class matter.)



# TABLE OF CONTENTS.

	Page.
FRONTISPIECE—BUFFALO IN 1812,	
ARCHÆOLOGY AND ARCHÆOLOGISTS IN WESTERN EUROPE, An Epitome of History—by Thomas Wilson,	335
ABORIGINAL COMMUNAL LIFE IN AMERICA—By Rev. W. M. Beauchamp	343
ON CERTAIN SUPPOSED NANTICOKE WORDS SHOWN TO BE OF AFRICAN ORIGIN—By Dr. D. G. Brinton,	350
PORTRAITS OF COLUMBUS IN HAVANA—By Prof. J. D. Butler, LL.D.,	354
THE DOCTRINE OF PROVIDENCE AS HELD BY THE ORIENTALISTS IN ANCIENT TIMES—By Rev. William Tucker, D. D.,	356
ÆNONE, THE FORSAKEN—A Poem—By Mrs. Harriet Newell Swanwick	360
CORRESPONDENCE—Mounds and Lodge Circles in Iowa, by Prof. Frederick Starr; River Dwellings in the Mud Flats of the Delaware River, H. T. Cresson; Mounds in Michigan, W. H. Sheldon; Pottery Vases, Are they Frauds? Dr. A. C. W. Beecher; The Worship of Psapus Among the Inians of British Columbia, James Deans; Phenix Paws, A. W. Williams; Mr. Wyman's Copper Implements, Dr. J. D. Butler,	361
EDITORIAL—The Geology, Geography and Aboriginal History in the Region of the Great Lakes; Spool Ornaments and Ear-rings,	372
FRAUDULENT POTTERY RELICS,	385
ETHNOLOGIC NOTES—By A. S. Gatschet,	386
NOTES FROM THE FAR EAST—By Harriet G. M. Murray-Aynsley,	387
LITERARY NOTES—The Communistic System; Bartram and Jones on the Communistic System; Mound Explorations; Cremation; Relics Secured by Peabody Museum; Two Links; Fairy Rings; Pre-Historic Trephining; A New Zodiac; Brass Kettle Found in a Mound,	389
BOOK REVIEWS—Twentieth Annual Report of the Peabody Museum: Iowa Historical Record, Article on Geography and Early American History, by A. B. Hinsdale; Papers of the American Historical Society, The Louisiana Purchase in its Influence upon the American System, by Rt. Rev. C. F. Robertson, D. D., History and Management of Land Grants for Education in the Northwest Territory, by George W. Knight, Ph.D.; Ohio and Archaeological and Historical Quarterly; Hours with the Bible, or, The Scriptures in the Light of Modern Discovery and Knowledge, by Cunningham Geikie, D. D.; How We Got Our Bible, by J. Patterson Smythe, A. B. LL.B.; Old Testament Characters, by Cunningham Geikie, D. D.; Biblical Topography, by Rev. George Rawlinson, M. A.; Japanese Homes and their Surroundings, by Edward S. Morse, with illustrations; The Camelot Classics, Great English Painters, arranged and edited by William Sharp, Malory's King Arthur, edited by Ernest Rhys; Jewish Artizan Life, by Franz Delitzsch, D. D.; Winter in India, by the Rt. Hon. W. E. Baxter, M. P.; Comparative Vocabulary of Algonquin Dialects; A Prairie Tragedy, the Fate of Thomas Simpson, the Arctic Explorer, by Alex. McArthur; Annual Report of the Manitoba Historical and Scientific Society, Winnipeg; The Chinook Winds and other Climatic Conditions of the Northwest, by A. Bowerman, M. A.; The Souris Country, by George Bryce, LL. D.; Our Winter Birds, by Alex. McArthur; The Footsteps of Time in the Red River Valley, by A. McCharles; The French Element in the Canadian Northwest, by Lewis Drummond; Some Red River Settlement History, by Charles N. Bell, F. R. G. S.; A List of the Mammals of Manitoba, by Ernest E. Thompson; Address Delivered before the Confederate Survivors' Association, by Col. Charles C. Jones, Jr., LL. D.,	394
BOOKS RECEIVED,	401
LIST OF EXCHANGES,	401

Ⓢ LIBRARY Ⓢ  
—OF—

# Aboriginal American Literature.

GENERAL EDITOR AND PUBLISHER:

D. G. BRINTON, M. D.,

115 South 7th St., PHILADELPHIA.

The aim of this series of publications is to put within the reach of scholars authentic materials for the study of the languages and culture of the native races of America. Each work is the production of the native mind, and is printed in the original tongue, with a translation and notes, and only such are selected as have some intrinsic historical or ethnological importance. The volumes of the series are sold separately, at the prices named.

NOW READY.

## *No. I. THE CHRONICLES OF THE MAYAS.*

Edited by DANIEL G. BRINTON, M. D.

Cloth, uncut, \$5.00.

This volume contains five brief chronicles in the Maya language of Yucatan, written shortly after the Conquest, and carrying the history of that people back many centuries. To these is added a history of the Conquest, written in his native tongue, by a Maya Chief, in 1562. The texts are preceded by an introduction on the history of the Mayas; their language, calendar, numeral system, etc.; and a vocabulary is added at the close.

## *No. II. THE IROQUOIS BOOK OF RITES.*

Edited by HORATIO HALE.

Cloth, uncut, \$3.00.

This work contains, in the Mohawk and Onondaga languages, the speeches, songs and rituals with which a deceased chief was lamented and his successor installed in office. It may be said to throw a distinct light on the authentic history of Northern America to a period fifty years earlier than the era of Columbus. The introduction treats of the ethnology and history of the Huron-Iroquois. A map, notes and a glossary complete the work.

## *No. III. THE COMEDY-BALLET OF GÜEGÜENCE.*

Edited by DANIEL G. BRINTON, M. D. Cloth, uncut, \$2.50.

A curious and unique specimen of the native comic dances, with dialogues, called *bailes*, formerly common in Central America. It is in the mixed Nahuatl-Spanish jargon of Nicaragua, and shows distinctive features of native authorship. The Introduction treats of the ethnology of Nicaragua, and the local dialects, musical instruments, and dramatic representations. A map and a number of illustrations are added.

## *No. IV. A MIGRATION LEGEND of the CREEK INDIANS*

By A. S. GATSCHET. 251 Pages. Cloth, uncut, \$3.00.

This learned work offers a complete survey of the ethnology of the native tribes of the Gulf States. The strange myth or legend told to Gov. Ogilthorpe, in 1732, by the Creeks, is given in the original, with an introduction and commentary.

## *No. V. THE LENAPE AND THEIR LEGENDS.*

By D. G. BRINTON.

Price, Cloth, \$3.00.

The extraordinary *WALAM OLUK* or *RED SCORE* of the Delaware is the basis of this work. The complete original text is given, with its 184 pictographs, a new translation, vocabulary, notes, and a long introduction on the Lenape, their legends, myths, customs, history and language. Much of it is from unpublished and original sources.

# *Horstford's*

## Acid Phosphate,

(LIQUID)

A preparation of the phosphates that is readily assimilated by the system.

**Especially recommended for Dyspepsia, Mental and Physical Exhaustion, Indigestion, Headache, Nervousness, Wakefulness, Impaired Vitality, Etc.**

Prescribed and endorsed by Physicians of all schools.

It combines well with such stimulants as are necessary to take.

**It makes a delicious drink with water and sugar only.**

For sale by all druggists. Pamphlet free.

Rumford Chemical Works, Providence, R. I.

---

 **BEWARE OF IMITATIONS.**

THE  
AMERICAN ANTIQUARIAN  
AND  
ORIENTAL JOURNAL.

JANUARY-NOVEMBER, 1888.  
VOLUME X.

EDITED BY STEPHEN D. PEET.

CHICAGO, ILL.:  
179 WABASH AVENUE.  
1888.



## INDEX FOR VOLUME X.

	Page
ABORIGINAL CULTURE, PROOFS OF.....	H. H. Bancroft..... 21
ARCHÆOLOGY AND ETHNOLOGY OF MICHIGAN.....	S. D. Peet..... 36
ARTIFICIAL TERRACES IN OHIO.....	T. J. Brown.....167
ANIMAL WORSHIP AND SUN WORSHIP IN THE EAST AND THE WEST.....	S. D. Peet..... 69
A STRANGE WAY OF KEEPING PEACE.....	James Deans..... 42
ANCIENT DIGGINGS IN NEBRASKA.....	J. E. Todd.....374
ALLEN, E. A., Article by.....	246
A STONE CHARM IN THE MOUTH OF A MOUND-BUILDER....	E. P. Vining..... 42
BANCROFT, H. H., Article by.....	21
BANCROFT'S WORKS Reviewed.....	132
BIBLIOGRAPHY OF THE ESKIMO LANGUAGE.....	J. C. Pilling..... 64
BUTLER, Prof. J. D., Article by.....	120
BRINTON, D. G., M. D., Books of, Reviewed.....	252
BERLIN, A. F., Correspondence of.....	252, 316
BROWN, THOMAS J., Article by.....	105
BOAS, DR. FRANZ, Articles by.....	40, 201, 365
BEAUCHAMP, REV. W. M., Article by.....	249
BOOK REVIEWS—Sixth Annual Report of the U. S. Geological Survey, 1884-1885, by J. W. Powell, Director; Proceedings of the New Jersey Historical Society, Second Series, Vol. IX; Conewago, a Collection of Catholic Local History, by John T. Reilly; An- cient Nahuatl Poetry, by Daniel G. Brinton; Totemism, by J. G. Frazier; Ancient Cities of the New World, by Desire Charnay; Record of Ancient Races in the Mississippi Valley, by William McAdams; Bibliography of the Eskimo Language, James Con- stantine Pilling; The Science of Thought, by F. Max Muller; Conventionalism in Ancient American Art, by F. W. Putnam.....	60
Ruins Revisited and the World's History Retold by an Amer- icanist; Race and Language, edited by Horatio Hale; Com- parative Phonology of Four Siouan Languages, by the Rev. J. O. Dorsey; Perforated Stones from California, by Henry W. Henshaw; The Use of Gold and Other Metals Among the Ancient Inhabitants of Chiriqui, Isthmus of Darien, by Wm.	

	Page
H. Holmes; Sepulchral Literature, by John Townshend; The Works of H. H. Bancroft, Popular Tribunals, Vol. II.....	129
Prehistory of the North, by J. J. A. Worsæ; Fossil Men and their Modern Representatives, by J. W. Dawson, LL.D., F. R. S., F. G. S.; Ohio Archaeological and Historical Quarterly, Vol. III, Nos. 3 and 4; American Journal of Archaeology and History of the Fine Arts, Vol. III, Nos. 3 and 4, Baltimore, 1887; Proceedings of the Academy of Natural Science at Philadelphia, Part III, December, 1887; Transactions of the New York Academy of Science, Vol. VI., 1886-1887; The Geological and Natural History of Minnesota; Cincinnati Journal Natural History, Vol. X, No. 4.....	194
The History of the People of Israel till the Time of King David, by Ernest Renan; Social History of Races of Mankind, Second Division, by A. Featherman; Ancient Society in Tennessee, by G. P. Thruston; The Journal of American Folk-Lore; Catalogue of the Minnesota Historical Society, 1888; Beauty Crowned, or the Story of Esther, the Jewish Maiden. by the Rev. J. N. Fradenburg, Ph. D., D. D; Discovery of the Origin of the Name of America, by Thomas De St. Bris; Irish Wonders—The Ghosts, Giants, Pookas, Demons, Leprecawns, Banshees, Fairies, Witches, Widows, Old Maids and Other Marvels of the Emerald Isle, by D. R. McAnally, Jr.; The Primeval World of Hebrew Tradition, by Frederic Henry Hedge; American Notes and Queries.....	260
The Prayer of a Navajo Shaman, by Dr. Washington Matthews; Collection of the State Historical Society of Wisconsin, Vol. XI., edited and annotated by Reuben G. Thwaites.....	330
The Palenque et la Civilization Maya: Arte de la Lengua; Qabbalah; Anales de la Museo Michoacans; Meurs et Monuments des Peuples Prehistoriques; Study of Folk-Lore of Philadelphia, and Folk-Lore of the Germans: Adventures of Pioneer Children; Forman's Journey, by Lyman Draper, LL. D.; History of Civilization, by E. A. Allen.....	366
CIRCLE AS A SUN SYMBOL, THE.....	S. D. Peet.....135
CROSS IN AMERICA, THE.....	S. D. Peet.....292
CHOCTAW CHUNGKEE GAME, THE.....	H. S. Halbert.....283
CHARNAY'S NEW BOOK—Note.....	42
CONVENTIONALISM IN ART, Book Review.....	F. W. Putnam.....63
CLANS AMONG THE PUGET SOUND INDIANS .....	120
COLLECTION OF THE STATE HISTORICAL SOCIETY, Wisconsin.....	325
COPPER AGE IN EUROPE.....	R. Forrer.....316
COPPER IN AFRICA—Note.....	325
CORRESPONDENCE—Novel Method of Preserving Peace, by James Deans, Victoria, British Columbia; Relics from a Cave in Ohio, by J. R. Nissley, Ada; Two-barred French Cross, by Prof. James D. But-	

# TABLE OF CONTENTS.

v

	Page
ler; A Stone Charm in the Mouth of a Mound-builder, by E. P. Vining.....	42
Did our Aborigines Smelt Galena, by J. D. Butler; Clans Among the Puget Sound Indians; Paleolithics in Pennsylvania, by A. F. Berlin; Hafted Paleolithics, by William Wallace Tooker; Human Foot-prints in the Eocene, by E. Flint.....	252
Fraudulent Relics, by A. F. Berlin; The Copper Age in Europe, by R. Forrer.....	316
Survival of the Stone Age, by Thomas Wilson; Ancient Canals in Nevada; Paleolithics in Nicaragua, by Dr. Earl Flint.....	380
DEANS, JAMES, Articles by.....	42, 109, 278, 352
DAWSON, SIR WM., Book Review.....	192
DORSEY, REV. J. O., Book Review.....	129
EPITOME OF PREHISTORIC ARCHEOLOGY IN WESTERN	
EUROPE.....	Thos. Wilson..... 3, 105, 158, 212
EELS, REV. M., Articles by.....	26, 174
EVANS, S. B., Articles by.....	115, 179
EUROPEAN ARCHEOLOGY.....	H. Phillips, Jr.....192
EDITORIAL—Paleolithics and Mound-builders, the Age and Date of.....	46
A Few Words for THE ANTIQUARIAN; Paleolithics and Neolithics; Archæology in Wisconsin.....	120
The Preservation of Monuments; The Ohio Centennial; Stone Mounds and Stone Walls.....	187
Paleolithics in Ohio.....	254
Archæological Relics in the Ohio Exhibition.....	322
The Serpent Effigy at Ft. Ancient.....	384
FRANCE, PALEOLITHIC AGE IN.....	Thos. Wilson.....3
FOSSIL MEN AND THEIR MODERN REPRESENTATIVES.....	J. W. Dawson.....192
FOLK-LORE, Journal of.....	260
FEATHERMANN, A., Book Reviewed.....	261
FORRER, R., Article by.....	316
FRAUDULENT RELICS.....	A. F. Berlin.....316
FOUR BEARS, Portrait of.....	269
FRADENBURGH, REV. J. N., Book Reviewed.....	258
FIGURES SEEN BY MARQUETTE—Note.....	51
FACE OF THE SUN, Frontispiece.....	69
FLINT, DR. EARL, Article by.....	252
GOVERNOR'S HOUSE AT UXMAL, Frontispiece.....	201



	Page
GREAT MOUND NEAR DETROIT, Frontispiece.....	1
GALENA, Smelted by Aborigines..... <i>Prof. J. D. Buller</i> .....	120
GHOSTS, GIANTS, POOKAS.....	260
GARNER, JOHN LESLIE Article by.....	285
GATSCHE, A. S., Linguistic Notes by.....	256
HOUSE OF THE ECHO.....	51
HOLMES, W. H., Book Review .....	129
HEBREW TRADITION, Book Review..... <i>H. F. Hedge</i> .....	260
HALBERT, H. S., Article by.....	283
HALE, HORATIO, Book of, Reviewed.....	129
HAFTED PALEOLITHICS..... <i>W. W. Tooker</i> .....	252
HUMAN FOOT-PRINTS IN THE EOCENE..... <i>E. Flint</i> .....	251
HOUSES AND HOUSE-LIFE..... <i>S. D. Peck</i> .....	333
HENSHAW, H. W., Book Reviewed .....	129
INDIANS OF PUGET SOUND..... <i>Rev. M. Eds</i> . . .	26, 174
ISTHMUS OF DARIEN.....	129
INDIANS, CLANS AMONG.....	120
ISLE OF MAN—Note.....	325
INDIAN PICTOGRAPHS—Note.....	325
Jade Relics, Exhibited by G. F. Kunz.....	389
LINGUISTIC AND ETHNOGRAPHIC NOTES..... <i>A. S. Gatschet</i> .....	256
LEGENDS OF JAMCHED QUETZACOATL..... <i>J. L. Garner</i> .....	285
LEGENDS OF THE CATLOLTQ, I, II,..... <i>Dr. F. Boas</i> .....	201, 306
LITERARY NOTES, by the Editor-in-Chief—The Mexican Bacchus, The Toltecs, Charnay's New Book, Chambers in Mounds, Colossal Heads, Death's Heads and Smiling Faces, Composite Photography, Serpent and Siva Worship, A Chinese Symbol at Copan, The Figures Seen by Marquette, The Sphinx in America, The House of the Echo, Wheeled Carriages in Prehistoric Times, Tattooing, The Natives of Hispaniola, Lectures on Palestine, Four Races in Yucatan, The Serpent Symbol in Sweden, Portraits in Stone, Viking Statue in Boston, Millionaire Indians, A Fossil Skeleton, African Symbolic Messages, Polynesians, Sierra Leone, Gigantic Idols, The Elephant's Trunk.....	51
Hervas, the Linguist, Circular on Paleolithics, Ursa Major, Mother-right, The Home of the Aryans.....	191
The Ancient Cities of Arizona, The Shaman in Northern Asia, Preservation of Monuments in America, Indian Pictographs, Ancient Works of Ohio, Built by Cherokees, Was America	

# TABLE OF CONTENTS.

vii

	Page
Known to Europeans Before Columbus, The Mound-builders, The Isle of Man, Cremation, Copper in Africa.....	325
Aboriginal Pottery of the Middle States, Jadeite Goblets, Gold Ornaments, Fraudulent Arrow Heads.....	389
MEXICAN BACCHUS.....	51
MYTHOLOGY OF THE NORTHWEST..... <i>James Deans</i> .....	209
MATTHEWS, DR. WASHINGTON, Articles by and Book Reviewed.....	269, 325
MONOTHEISM A PRIMITIVE FAITH..... <i>E. A. Allen</i> .....	246
MOUND CRANIA..... <i>F. W. Langdon</i> .....	378
NISSLEY, J. R., Article by.....	42
NEW YORK EARTHWORKS..... <i>W. M. Beauchamp</i> .....	249
NAME OF AMERICA, Book Review.....	260
NATURE WORSHIP IN ANCIENT RELIGIONS..... <i>Wm. Tucker</i> .....	155
NEW DISCOVERIES.....	258
NE-KILT-LUSS, FEAST OF..... <i>James Deans</i> .....	377
OHIO CENTENNIAL—Editorial.....	187
PROOFS OF ABORIGINAL CULTURE..... <i>H. H. Bancroft</i> .....	21
PUGET SOUND INDIANS..... <i>Rev. M. Eells</i> .....	26, 174
PALEOLITHICS AND NEOLITHICS—Editorial.....	46
PERUVIAN CIVILIZATION..... <i>L. P. Gratacap</i> .....	95
PYRAMIDS OF TEOTIHUACAN..... <i>S. B. Evans</i> .....	115
PERFORATED STONES FROM CALIFORNIA, Book Review.....	129
PREHISTORIC ARTIFICIAL TERRACES, Book Review..... <i>Thos. J. Brown</i> .....	167
PRESERVATION OF MONUMENTS—Editorial.....	187
PRE-HISTORY OF THE NORTH, Book Review..... <i>J. J. A. Worsax</i> .....	194
PYRAMID IN AMERICA, Illustrated..... <i>S. D. Peet</i> .....	212
PALEOLITHICS IN PENNSYLVANIA..... <i>A. F. Berlin</i> .....	252
PHILLIPS, H, JR., Article by.....	192
PALEOLITHICS—Editorial.....	254
PRAYER OF A NAVAJO SHAMAN, Book Review.....	330
PRESERVATION BY COPPER SALTS..... <i>Frederick Starr</i> .....	279
RECORDS OF ANCIENT CITIES.....	60
RAVEN IN MYTHOLOGY..... <i>James Deans</i> .....	189, 273
RUINS RE-VISITED, Book Review.....	129
RUINS OF ANCIENT CITIES IN NEW MEXICO, Book Review... <i>Charnay</i> .....	255

	Page
RENAN, ERNEST, Book Review.....	260
RUSHING EAGLE, Portrait of.....	269
RELICS FROM A CAVE IN OHIO ..... <i>J. R. Nisley</i> .....	42
 SERPENT AND SIVA WORSHIP—Note.....	 54
SPHINX IN AMERICA.....	55
SERPENT SYMBOL IN SWEDEN—Note.....	58
SYMBOLIC MESSAGES IN AFRICA—Note.....	58
SCULPTURED STONE OF TEZCUCO..... <i>S. B. Evans</i> .....	179
STONE MOUNDS AND STONE WALLS—Editorial..	187
SOCIAL HISTORY OF RACES, Book Review.....	260
 TRIBAL BOUNDARIES OF THE ESKIMOS..... <i>Dr. Franz Boas</i> .....	 40
TWO MANDAN CHIEFS..... <i>W. Mathews</i> .....	269
TWO-BARRED FRENCH CROSS..... <i>J. D. Butler</i> .....	42
TOTEMISM, Book Review.....	60
THRUSTON, G. P., Book Reviewed.....	260
TOOKER, WM. WALLACE, Article by.....	252
TUCKER, WM., Article by.....	154
 WILSON, THOS., Articles by.....	 3, 105. 158. 212
WHEELED CARRIAGES—Note.....	151

Case.....

Shelf.....

# LIBRARY

OF THE

Peabody Museum of American Archaeology and Ethnology

IN CONNECTION WITH HARVARD UNIVERSITY.

BY PURCHASE

Received

Jan. 27, 1888.



**GREAT MOUND NEAR DETROIT, MICHIGAN.**

THE  
*American Antiquarian.*

---

VOL. X.

JANUARY, 1888.

No. I.

---

EPITOME OF PREHISTORIC ARCHÆOLOGY IN WEST-  
ERN EUROPE.

SECOND PAPER.

FRANCE—PALEOLITHIC AGE.

France has the honor of the successful discovery and establishment of the science of Prehistoric Anthropology. M. Boucher de Perthes, of Abbeville, discovered the rude chipped flint hatchets in the gravel drifts of the River Somme at Saint Acheul and first proved them, after twenty-five years toil and contention, to be the work of man.

M. Edward Lartet pushed his discoveries among the caves of the Dordogne district and showed them to have been occupied by man during the quaternary period and contemporaneously with its fossil animals. He applied the names of the principal of these animals to the epochs of prehistoric Man, as Cave Bear, Mammoth, Reindeer and Bison.

M. Paul Broca measured the man who was found by the explorer in Southern France, reduced the facts to form and established Prehistoric Anthropology as a science, while M. de Mortillet has done no less worthy labor by giving to it a nomenclature—the names of things seen, by means of which one can communicate his ideas with certainty, can understand what he hears, and others that of which he speaks.

It would be obviously impracticable and invidious to attempt a list of even the eminent anthropologists of France. She has not only her Societie d'Anthropologie at Paris, one of the strongest in the world, with 432 working members, the most of whom we would have to include in our list, but nearly every department, and most cities and towns throughout the Republic, have their corresponding official local societies and museums; not to mention the many private museums, supported and carried on by ardent and capable scientific workers, both in the field and the cabinet, whose name is legion. We can not put them in and

would not leave them out. I regret the stern necessity which seems to compel me to omit the names of some eminent anthropologists, not only of national but international fame who have proved themselves to be kind friends, when the writer was a stranger in a strange land and needed assistance and advice.

No description of Prehistoric Anthropology in France would be permissible which omitted the system of division into epochs and the nomenclature of M. de Mortillet.

The epochs relating to Tertiary man will be treated under that head, but the divisions of the paleolithic age are so peculiarly French that they had best be mentioned here. The four epochs of M. de Mortillet first mentioned are his subdivisions of the paleolithic age. The names Chelléen, Mousterien, etc., are given after the localities in which the implements have been found in their greatest number and purity.

The bottom of the chart indicates the earliest supposed appearance of man in Western Europe, and as it rises it gives his later epochs or ages, until it ends at the top with the historic Greeks and Romans.

Chelleen.....	35 per cent.....	78,000 years.
Mousterien.....	45 per cent.....	100,000 "
Solutreen.....	5 per cent.....	11,000 "
Madelenien.....	15 per cent.....	33,000 "
Or a total of.....		100 per cent..... 222,000 "

M. de Mortillet, establishing the unit of the duration of the paleolithic period at 100, has divided its epochs proportionately,

Of course, this is only approximative. It is but an offer, a suggestion, and its author does not pretend much more. I believe it can be shown that man has lived on earth during the almost, if not entire quaternary period. This has been calculated by geologists at various durations—from 36,000 to 250,000 years, but on this I have no opinion.

#### CHELLÉEN EPOCH.

This epoch is purely paleolithic.

These instruments are called Chelléen from the little station of Chelles, on the river Seine, a few miles east of Paris. Though not here so numerous, they are in greater purity as a class than at the station of St. Acheul, on the river Somme, the place of their original discovery, and thus they take the former name.

So far as can be now asserted with confidence, these implements are the earliest made or used by man. They may have been axes, hatches, knives, spear-heads, or what-not. They were a tool for every use, just as a sailor would use his knife if he had no other tool or weapon.

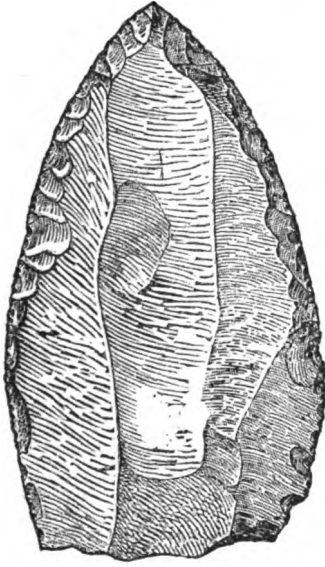
They have been called in England drift implements because they have been found in the river drifts or deposits. Their posi-

my collection at the Smithsonian Institution. Both had their existence before that terrace was formed and were placed there with it.

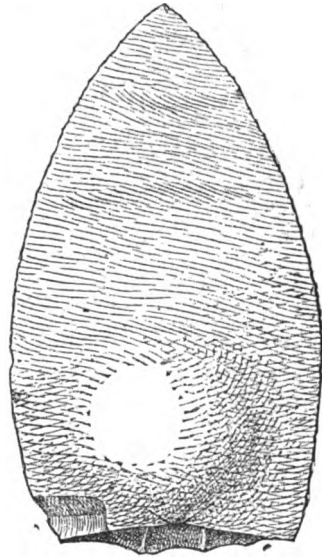
#### MOUSTERIEN EPOCH.

So named after cavern de Moustier, on the river Vezere, in Dordogne, where the implements are found in their purity.

The following are the implements typical of this epoch.

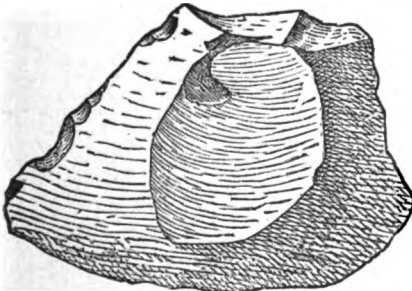


*Fig. 2. Mousterien point, spear or other-wise. Flint, from cavern le Moustier, river Vezere, Dordogne. Gathered by Lartet and Christy, who discovered the cavern. Natural size.*

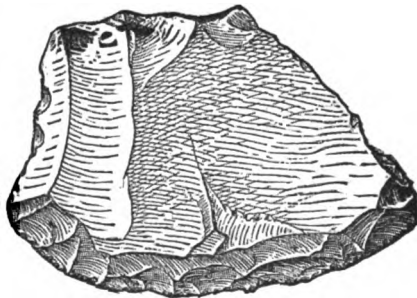


*Fig. 3. Opposite side of Fig. 2, showing conchoid of percussion and that it was struck by a single blow.*

Their peculiarity is that the side joining to the original block is untouched, while the point and edge are formed by retouching or chipping all from the opposite side.



*Fig. 4. Mousterien racloer or scraper. Flint From Chez Pourc, near Brive, Correze. Gathered by Elu Massenat. Natural size.*



*Fig. 5. Opposite side of Fig. 4.*

These are made in the same manner as the points. They make their first appearance in this epoch.



We are led to conclude that a warm climate, with much rain, prevailed in this country during the Chelléen epoch, and that man had small need for clothing and shelter.

But later this seemed to have changed. The climate became cold and rainy. Man sought the caves and rock shelters, and clothed himself with skins. Here appear the first scrapers for currying or softening hides and skins. The evidence of the caverns in implements, ashes and *debris* shows that people inhabited them during a long period.



Fig. 6 and 7. *Solutréen points, laurel leaf shape. From the grotto de l'Eglise, Excedun Dordogne. Gathered by Dr. Parrot. Half natural size.*

It has been contended that the Mousterien epoch of the cave period of prehistoric man was, at least in Southern France, contemporary with the glacial period.

This would sufficiently account for his occupation of the caves and rock shelters.

The torrid animals took their departure for the South, and they were replaced by Arctic animals. I cannot enlarge on this; but the reindeer, wolf, fox, chamois and mountain goat are illustrations. The reindeer became to the man of the cave period in Southern France of the same value he now is to the Laplander:

#### SOLUTRÉEN EPOCH.

So named after the cavern of Solutré, near Macon, Saône et Loire. The man of this age excelled in the art of chipping flint, and the implements are renowned for beauty of form and fineness of finish. It is by this progress that this epoch has become recognized.

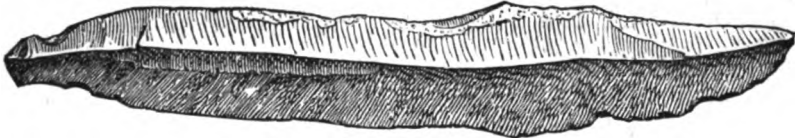


Fig. 8. *Solutréen spear point, possibly harpoon, finely chipped. From grotto de l'Eglise, Dordogne. Gathered by Dr. Parrot. Natural size.*

The Chelléen implement has ceased to be made; also the one-sided Mousterien point. The large and thin spear-head, shaped like a laurel leaf has probably replaced them.

There are also small points with a tang and the shoulder all on one side. Points were also made of bone, sometimes to

be used for piercing or in sewing garments; sometimes to replace the chipped flint for spear-points. The scrapers have changed in form. They are smaller and the end instead of the side has the sharpened edge. Knives and saws of flint also appear. This epoch and the station of the name is remarked for the great number of horses of which the *debris* is formed. It was probably the principal article of food, but not yet domesticated.

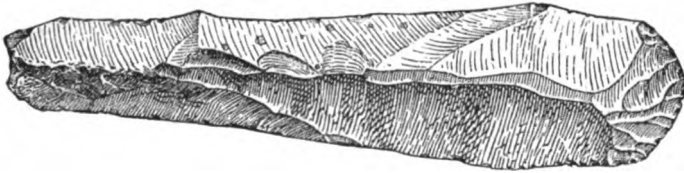


*Fig. 9. Blade of flint, probably used as a knife. La Madeleine. Two thirds natural size.*

#### MADELENIEN EPOCH.

From the rock shelter on the Vezere, Dordogne, about half way between Le Mousteir and Les Eyzies.

This epoch endured longer. Its stations are more frequent, its area more extended, its implements increase in number, variety, and form, and indicate continued progress.



*Fig. 10. Scraper of flint, with, cutting edge on the end, instead of side, as formerly. La Madeleine. Lartet and Christy. Two thirds natural size.*

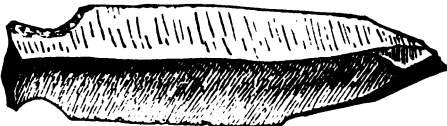
While in former epochs the almost sole substance used by man for the fabrication of his utensils and implements was flint,



*Fig. 11. Graver or burin of flint, with which engraving on bone was done. From Les Eyziers, on the Vezere, Dordogne.*

or at least stone, in this epoch he used bone, horn, and ivory. He made the long, straight flakes of flint in profusion, for his need for knives and saws was naturally great. Scrapers, gravers, etc., were also of flint; but piercers or points, needles, harpoons, hooks, and ornaments of divers sorts were made of bone, horn or ivory.

It is in its art that this epoch is most peculiar. Here for the first time (and the last for many centuries) are to be found essays or examples of the realistic art or representations of things living and seen by the artist.



*Fig. 12. Same as No. 11. From Laugerie-Basse, on the Vezere, Dordogne.*

This is also a proof of the existence in that epoch, of animals now extinct and the contemporaneity of man with them.

Among them are:

A reindeer at pasture. Thayingen. Original at Constance.

A mammoth engraved on his own tusk.

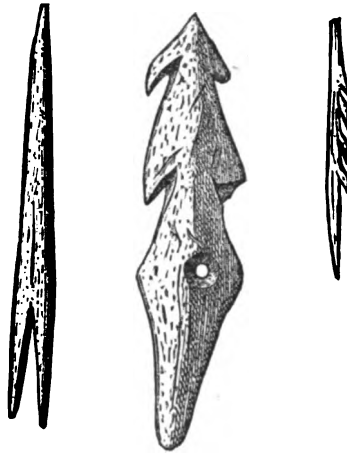
A cave bear engraved on a flat stone of schiste from grotto of Massat; original at Foix.



*Fig. 13. Harpoon made of reindeer horn. Bruniquel Tarn et Gerome, Lucien Brun. Two thirds natural size.*

A poignard made of reindeer horn, the original of which is made into the horn of a reindeer himself. Bruniquel. The long one whole is from Massenat's recolte at Laugerie-haute.

The artist must have seen these animals before he could depict them.



*Fig. 14.*

*Fig. 15.*

*Fig. 16.*

*Fig. 14. Arrow-head of bone. Grotto of Gourdau. Gathered by Judge Pieltte. Two thirds natural size. Fig. 15. Harpoon of reindeer horn, hole for cord. Grotto de la Vache, Tarascon, Arlege. Gathered by Dr. Garrigou. Fig. 16. Small harpoon of bone. La Madeleine. Lartet and Christy.*

Here we have harpoons and spear points or piercers. There has also been found an instrument, the use of which is as yet unknown, but which has been named "baton, (or stick) de commandement," supposed to have been an emblem of authority. They have from one to three holes and are sometimes engraved with groups of men or animals.

#### NEOLITHIC AGE.—PREHISTORIC MONUMENTS IN FRANCE.

The prehistoric monuments all belong to a later age than the paleolithic. The man of that age left no monuments. Those of France may stand as a sample for the rest of Europe.

They are principally divided into two groups, menhirs and dolmens, and then again into two others; the former includes alignments and cromlechs, while the latter includes tumuli.

England has generally adopted the French names, which have been largely furnished by the ancient Breton language.

Dol means table. Men means stone, rough stone; possibly rock would be a better translation. Dolmen means a table of stone with supports. It was a tomb for the prehistoric dead.

Hir means on end. Menhir means a large stone standing on end.

Lech means a smaller stone. Cromlech means a circle of stones.

Alignment and tumulus are modern, and mean, the first, lines of menhirs. the second, a mound of earth or stones, usually covering a dolmen.

The following table will show the number and geographical distribution of the prehistoric monuments in France:

Geographical Distribution Sections.	Dolmens.	Menhirs.	Alignments.	Cromlechs.	Polishers.	Basins.	Rocking Stones.	Various.
North west section, 5 dep'tm'ts.	652	739	23	42	1	45	22	32
Northern section, 14 dep'tm'ts.	267	190	4	17	6	4	2	33
Eastern section, 15 departm'ts..	176	186	.....	17	39	14	3	407
Southeast section, 24 dep'tm'ts	456	162	.....	9	8	24	17	15
Southern section, 16 dep'tm'ts.	1,286	101	16	355	.....	10	17	6
Center section, 14 departments	633	199	2	17	3	28	38	10
Total.....	3,468	1,577	56	457	57	135	99	503

Total of all kinds in all France, 6354.

#### MENHIRS.

These are the single stones standing on end.

There exist in France about 1,600 menhirs, of which the following are chief:

Penmarck, 25 feet in height.

Cadiou, 28 "

Kerangosquier, near Pont Aven, 21 feet.

Mount Dol, 31 feet in height.

Plouarzel, 36½ "

Plesidy, 37 feet in height.

Lochmariaquer,  $67\frac{1}{2}$  feet in height.

The latter is fallen and broken into four pieces. It is  $13\frac{1}{2}$  feet wide,  $7\frac{1}{2}$  feet thick, and has the enormous weight of 347 tons.

#### ALIGNMENTS.

The Province of Brittany has 23 alignments—one-half of those in all France. The departments of Morbihan and Finistère have, together, 17 of these. Carnac has in its immediate neighborhood 6 out of these 17. These six alignments represent 3,000 menhirs.

This one, Menec, near Carnac, has 835, arranged in eleven parallel lines, 3,778 feet in length and 328 feet in breadth at the head, tapering to 200 feet at the tail. It has at its head a cromlech of 62 menhirs.

Kermario has 678 menhirs, no cromlech, nine parallel lines, 4,037 feet in length—same width as Menec.

Kerlescant has 258 menhirs, a cromlech square of 39 menhirs, 13 lines, 1,000 feet in length—393 feet in width at the head and 164 at the tail.

Erdeven has 13 lines, 1,120 menhirs, 6,886 feet in length, 836 in width at the head and 180 at the tail.

About one-half of these have been overthrown and are lying on the ground. About ten per cent. should be added for all the menhirs known to have been destroyed in modern or historic times. Without doubt the gaps now existing were once filled. This would double, if it did not treble, the number. These monuments have served as stone quarries for the neighborhood, and doubtless the great castles and churches of the early ages were built therefrom.

There they stand, enormous, rough, rude, unhewn granite stones—great in their mightiness and loneliness, silent in every language that we know, mysterious in their solitude, dotting the country in every direction—in it but not of it; belonging to another civilization mighty in its time, but now dead and buried in the ages of the past. They have no inscription, and, except their existence, no history. We know them to have been the work of man, and that is about all we know. As in the case of menhirs, they rear their heads like great giants. In the alignments they stand in close array with serried parallel lines, and stretch themselves across the level country miles away, their bodies gnawed and their heads scarred and seamed by the tooth of time from exposure to the elements during and since the prehistoric ages, uncorrected and uncountable, when they were erected. It is their size, their simplicity, their number, repetition, as well as their antiquity, which render them imposing and so impressive. No words can convey to our

an adequate idea of their impressiveness. They must be seen to be appreciated. I shall never forget my feelings as I stood among the great monoliths of Kermario one bright night of the harvest moon of 1885. These are from six to twenty-three feet in height, and weigh from one to ninety tons.

As to the age of these alignments let me tell of an incident to which I was an eye-witness.

The menhirs, whether standing or fallen, are frequently used as fences, the intervals being filled usually with an earthen embankment. In the headline, at the alignment of Erdeven, many had fallen and were thus covered with earth. It fell to us to uncover them. One four or five feet thick and ten or twelve feet



*Dolmen of Lochmariaquer, or Table de Marchand.*

long had been hewn as it lay, for what we knew not, but we could see the marks of the axe. It had served as a fire-place. There was the charcoal and the stone bed and back wall, all bearing traces of fire. Pieces of flint, a small celt of fibrolite, *debris* of pottery (some dolmen, but much Roman), showed that this occupation belonged to the Roman times. This menhir was laid prostrate fifteen hundred to nineteen hundred years ago; yet it had stood on end long enough before that, for the top to become so weathered, as to be plainly distinguishable from the bottom.

#### DOLMENS.

These are made in the form of chambers, sometimes 4 feet by 6 by 4, sometimes 16 by 30 by 8. They are usually square, but



sometimes round. The greater number have but one chamber, but many have side or lateral chambers, even as many as six. They are made of huge, flat, unhewn stones of the local rock. These are stood on edge to form the sides and ends, while larger ones called tables cover the top.

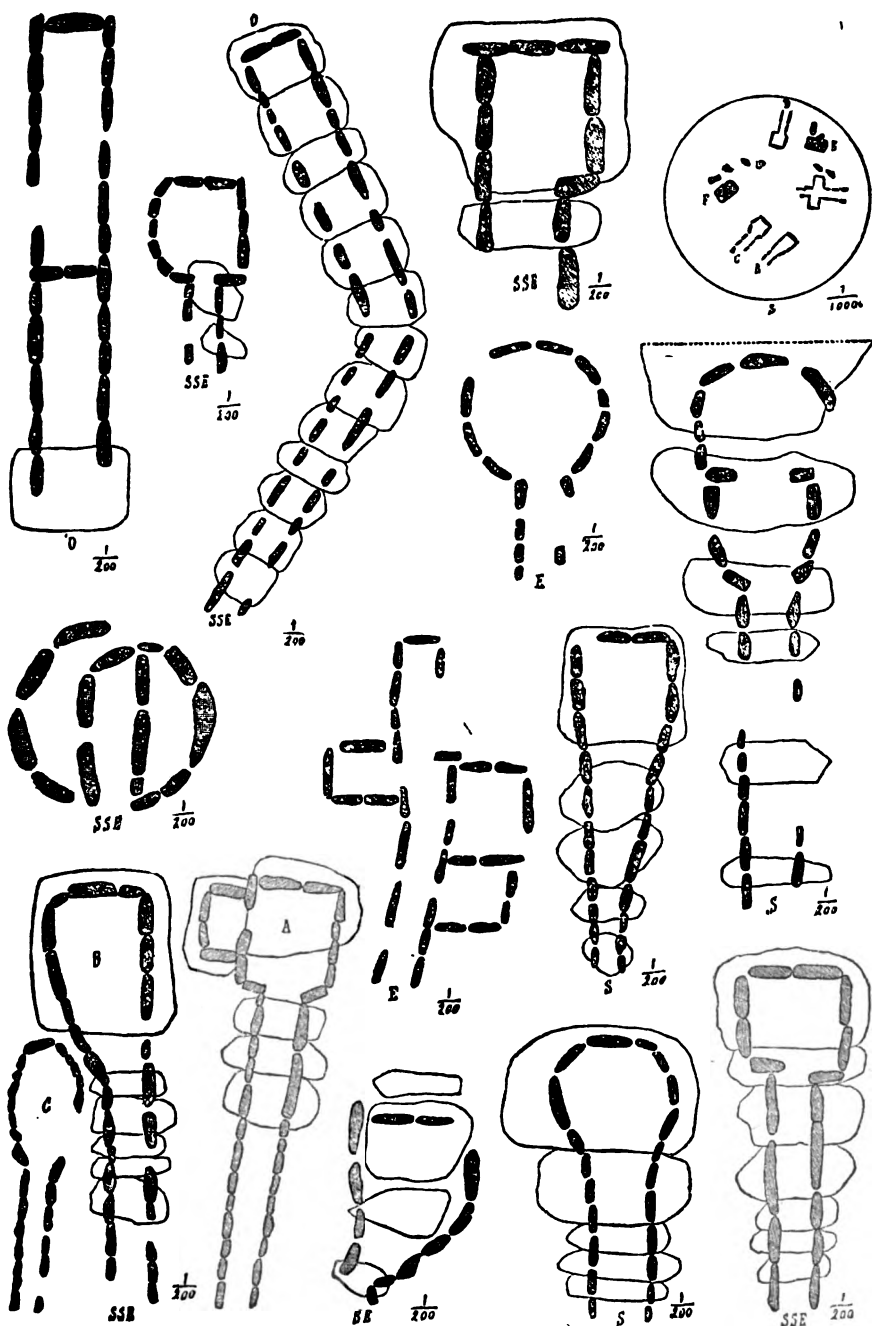
All the stones of the dolmen of Lochmariaquer are of granite. On the bottom of the covering stone is an outline engraving, rudely cut, of a stone hatchet with its long handle. The village in sight is that of Lochimariaquer, and beyond is the gulf of Morbihan. The visitor never forgets this place. If he is a classic scholar he may know that this was the scene of Cæsar's great sea fight with the Venites, wherein he out-generaled and



*Dolmen of Grand Island.*

out-maneuvered them, and by cutting their halyards put them at his mercy, captured them seriatim. Whether classic or not, he passes about among the different monuments of the prehistoric times here, so great in number, magnitude and interest. The road from hence to Carnac, Plouharnel and Erdeven is lined with them. The best way to see these wonderful monuments understandingly is to descend from the train at Plouharnel-Carnac, and enquire for Père Galliard, the government inspector of megalithic monuments in Western Morbihan. He will procure a conveyance and give the best explanations.

I exhibit the ground plans of a dozen of the more important. It may be remarked that though they are all of a general type, yet no particular form has been followed in their construction.



Ground Plans of Dolmen and Tumuli in Brittany.



Each has its own individuality and differs from every other. They had no particular ornamentation.

Many of the dolmens are covered with earth and are tumuli. All may have been once so covered. A reason, aside from the local appearance, is that it is usual, if not universal, to find a vestibule, corridor, or covered way, made of the same kind of stones and in the same way, on the same level, leading from the entrance of the principal chamber, gradually narrowing both in width and height to what would appear to have been the circumference of the tumulus. In this regard the dolmen now without a tumulus corresponds to those covered by one. Some of these corridors are forty to fifty feet in length. In this way the tomb could be covered, the entrance closed, and the monument completed, and yet be easily opened and entered, upon the occasion of a second or subsequent interment.

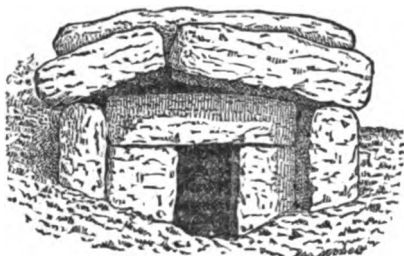


Fig. 20. Entrance to Dolmen of Pierre-Turquoise, Seine-et-Oise. A veritable door with side posts and a lintel.

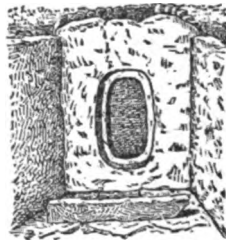


Fig. 21. Dolmen of Justin, Oise. Oval entrance cut out of the solid center.

The entrances or doors to dolmens are usually made by omitting in its construction one of the upright supports. This entrance is then closed by inserting a moveable stone. There are



Fig. 22. Dolmen of Gramont, Herault. Opening cut out of the bottom on the solid edge.

dolmens with a different entrance. A hole is cut through the door or closing stone, sometimes round and sometimes oval. Sometimes the hole for entrance is cut out



Fig. 23. Dolmen of Rodmarlon, Gloucestershire. Entrance of the edge of gland. Guillotine entrance.

the bottom of the closing stone. I discovered one of these in a dolmen opened near Gramont. Some dolmens have an entrance called, from its shape, appearance and mode of construction, the guillotine, the entrance being formed of two stones with the hole cut, one half out of each stone, and made complete by the pieces, and forming a hole, round or oval. Of this kind was the dolmen of

and lost. The dolmens were constructed of the local rock. In Brittany they were always of granite, because granite was the rock of the country. In Southern France they were frequently of limestone. But, as a rule, they were of large stones and without other attempt at construction than to place the stones in position, which they kept by force of gravitation. Fig. 22 shows a dolmen built of small stones in the form of a wall, laid without mortar. This is in England. I saw another of similar construction at the town of Cortona, in Italy.

It is the opinion of M. Cartailhac, and also of Sig. Pigorini, who contest for priority of discovery, that the dolmens were usually, if not always, *ossuaries*—places of second burial, burial of the bones after they had been denuded of their flesh. M. Cartailhac has written a complete history of the custom of double burials. The custom prevails to this day in provincial France.\*

## II.—GREAT BRITAIN.

England, by Sir John Lubbock, has the credit of inventing the names *palæolithic* and *neolithic*, respectively, for the ages of chipped and for polished stone. She has a host of able workers in the prehistoric field. Mr. John Evans, Professors Huxley, Boyd Dawkins, E. Tyler, Canon Greenwell, General Pitt-Rivers, Messrs. Pengelly, Stevens, Franks, Galton, Cunnington, father and son, Munro, Lukis, and many others. The books published by most of these gentlemen are the least of their labors. They are but the records of their real labors given to the public.

Sir John Lubbock, M. P., is the author of the statute for the preservation of prehistoric monuments in Great Britain. I do not stop to explain its provisions. Sufficient that its purpose is indicated by its name. The public laws on this subject are usually an index to the public interest.

Mr. John Evans is as much numismatist as archæologist or anthropologist. A gentleman of wealth (but not of leisure, for he is a hard worker), he employs it largely for the benefit of the sciences in which he is interested. His collections of objects at his own house, Nash Mills, Hemel Hempstead, in Hertfordshire, are exceeding rich, and any one who has the privilege of an examination of these treasures under the guidance and with the explanations of the owner, may consider himself favored.

General Pitt-Rivers, formerly Colonel Lane Fox, has donated his extensive prehistoric collection together with that other richer and more unique one intertwined with it, of the arms and weapons of all times and all nations, to the University at Oxford. They are now being prepared for display in a worthy manner.

Mr. W. A. Franks is curator of prehistorics at the British Mu-

---

\*NOTE.—The author acknowledges his obligations to MM. de Mortellet and Cartailhac for copies of cuts and engravings.

seum. I enjoyed my visits there under his direction. He has the credit, (I do not vouch for its truth, though I am willing to spread gossip of such creditable nature), of living on his official salary of £1,500 and spending his private income, £13,000, for the benefit of the branch of the museum under his charge.

Mr. Pengelly explored Kent's and Brixham caverns at Torquay doing fifteen years work—the funds furnished largely by the British Association for the Advancement of Science.

Professor W. Boyd Dawkins did the same with Victoria cavern, and also with so many others that he has become an authority on the subject.

Mr. Francis Galton has been doing excellent service to the science by his labors in Anthropometry, the extent of which may be guessed by the fact that he measured at the London Exhibition called the Healtheries no less than 10,000 persons; and that in his calculation of what he calls "Regression in Hereditary Stature," he examined the registers of no fewer than 205 parents and 928 children. He proves the average height of the average Briton to be  $68\frac{1}{4}$  inches, and has shown the rules and proportions by which all children tend to return to that height which he calls "Mediocrity."

### III.—SCOTLAND

is not behind her sister country. Professor Anderson and Mr. Arthur Mitchell of Edinburg are gleaning the fields of their archæological riches and are storing the fruits in the Royal Museum of Antiquities of their cities. The book of the latter, "The Past in the Present," is valuable as a warning to those who see a marvellous antiquity in every object dug out of the earth or found in a museum, from a picked stone used by a boy as a nut cracker down to a piece of prehistoric pottery made by hand, which can be shown to have been done in one of the back districts, *last year*.

Mr. Monro has discovered lake dwellings of the prehistoric man of the bronze age in Scotland. Some exist in Ayrshire, the land of Burns, but I found them filled with or covered in peat-bogs, and that they resembled more the *terremare* of Italy than the lake dwellings of Switzerland.

Sir George Campbell, M. P., former Governor of India and now in the United States as one of the British Commissioners on Fisheries, devotes himself amid the multiplicity of his official duties to Anthropological studies.

### IV.—IRELAND

was inhabited by a prehistoric people and the remains of their life and industry are to be found in the peat-bogs, and everywhere over the country. Ireland has given her name to the fossil Elk found nearly entire in these bogs, and which is evi-

dence, by its contemporaneity of the antiquity of her human occupants. Her museum at Dublin is exceedingly rich; it out-ranks all others in its golden archæologic treasures, while its catalogue is worthy to be called a history.

This excellence on the part of the Irish people in prehistoric researches is to be expected, for they are born antiquarians. They delight in mystery; they preserve their traditions; their myths are as old as they; they are on excellent terms with the *weefolk*, the brownies; their history, as they tell it, whether political or ecclesiastic, antedates that of all other countries, while their complaints against the British government extend to grievances almost prehistoric.

#### V.—SWITZERLAND

rejoices in the honor of the discovery and possession of the Lake Dwellings. Dr. Ferd. Keller, of Zurich, was the pioneer. He made his first discovery at Meilen, Lake Zurich, in the winter of 1853-4. Switzerland has been fortunate in having a band of enthusiastic, diligent and capable laborers in this science, and the governments, whether general, cantonal or municipal, have responded to their endeavors with liberality and judgment. Dr. Gosse, Moret Fatio, the pioneer *chercheur* Messikommer, Schwab, Desor Gastaldi Forel, Cross, have all distinguished themselves. Of these the first three alone continue; all the others have either died or retired.

Switzerland was scarcely occupied during the paleolithic age. But two stations have been discovered in all her borders, and these are, the one, Thayingen in the extreme northeast, and the other, Mont Saleve, in the extreme southwest. To account for this it has been suggested that the face of the country was covered with ice during the glacial period, which corresponds with the mousterien epoch of that age. But she made up for this poverty during the succeeding ages. The greater number of her lake dwellings are supposed to have been out in the water, although near the shore and where it was shallow; but many (one can not guess how many, owing to the greater facility for decay and destruction) were on the mainland. Switzerland is the country of lake dwellings, because it abounded in lakes and the mountains were not inviting dwelling places; but the lake dwellings extended over the adjoining districts of France, Italy and Germany, where similarly situated.

The era of lake dwellings forms no epoch in itself: they were only the incidents of the location. The dwellings on a given spot may have been removed again and again even in the same age, the preceding settlement having been destroyed, possibly by fire, possibly by an enemy. At Robenhausen, which station has given its name in France to the neolithic age, there were three prehistoric occupations, one atop another, and each was destroyed

before the next began. The tops of each set of piles are from three to five feet higher, taller, than the earlier set. The number of houses in the first occupation has never been estimated; that of the second has been estimated at thirty, and the third and last at fifty houses. The settlement covered about three acres and contained about 100,000 piles.

Keller reported in 1879, 161 prehistoric lacustrine stations and I can suppose the number to have doubled since then.

The occupation of the lakes for dwellings continued through the bronze and iron ages, as well as during that of stone. These different occupations were not always continuous, perhaps never were. In many places, notably at Morges, on Lake Geneva, there are three different stations occupied by prehistoric man, each independent of the other—all within a space of 500 or 600 yards. The first one was called "The Church," the implements of which were all stone—no metal; the second, Roseaux—a mixture of stone and the straight, flat bronze hatchets belonging to the earliest period; the third, the great city of Morges, in which the implements found, to the number of five or six hundred, all belonged to the fine age of bronze—no stone. Here there could have been no contemporaneity—no mixture. Each must have been destroyed before the other began. That this could be, is proved by what we know from history, for the present town of Morges has existed for a thousand or fifteen hundred years, until 1854, without a suspicion that these three other towns had consecutively existed on its site.

In the Lake of Geneva there are fifteen or twenty stations belonging to the neolithic age and twenty-five or thirty to the bronze age. In the common cantonal map there is shown in Lake Bienné two stations of the stone age, four of bronze, and four of iron—in Lake Morat five of stone, four of bronze and two of iron—in Lake Neuchatel nineteen of stone, sixteen of bronze and four of iron. This is highly imperfect, for I know many stations not noted, and where noted as one, they really include several stations.

At Chevroux, Lake Neuchatel, I found twelve stations, of which seven belonged to the neolithic and five to the bronze age, yet they are noted at only one of each.

An idea of the extent of these stations may be obtained from the fact that they contain from 10 to 100,000 piles. I drew one out at Estavayer, Lake Neuchatel, and brought it home and it and its cast are now in the Smithsonian Institution. At the station of Wallishofen, Lake Zurich, discovered about three years since, there have been found no less than 2,000 bronze hair pins, some long with large and beautiful heads, which, when polished to their original gold color, must have given a gorgeous appearance to the female head dress of that age.

Every canton, every city, every town has its museum of these

prehistoric antiquities. The city of Berne has three—one governmental, just purchased from Dr. Gross, of Neuveville for 60,000 francs—another belonging to the canton and another to the city. Besides, there are many students, professional and amateur, who possess valuable private collections. All the Universities and Colleges are well equipped in this respect.

Washington, D. C.

THOMAS WILSON.

### PROOFS OF ABORIGINAL CULTURE.

The Maya and the Nahua may properly be called the two representative branches of the aboriginal American civilization, in spite of a strong similarity in their art, thought, and religion. The language of each of these nations was entirely distinct from the other, and these two stocks show many and clear points of difference in their traditional history, their material relics, and above all in their methods of recording events by hieroglyphics, indicating either a separate culture from the beginning, or, what is more probable, a progress in different paths for a long time prior to the coming of Europeans. Many of the natives not clearly affiliated with either branch show evident traces of both cultures, arising probably from contact and intermixture of the parent stocks with each other and with the neighboring savage tribes. This classification however, can be accepted only in a very general sense and for practical convenience in elucidating the subject, since there are several nations that must be ranked among civilized peoples, although particularly in their language they show no Maya or Nahua affinities.

Nor must too much importance be attached to the names Maya and Nahua; the former is adopted because the Maya people and tongue are commonly regarded as among the most ancient in all the Central American region, and the latter because it is an older designation than either Aztec or Toltec for the civilization embracing the territory of the present Mexican Republic. In published works upon the subject, the Aztecs are the representatives of the Nahua element, and indeed what have been called the Aztecs have furnished material for nine-tenths of all that has been written upon American civilized nations; but the truth of the matter is, that the Aztecs were only the most powerful of three confederated nations, which in the sixteenth century ruled central Mexico from their capitals in the valley. These three nations were the Acolhuas, the Aztecs, and the Tepanecs, and their respective capitals were Tezcuco, Mexico, and Hacopan. When the confederation was formed, about one hundred years before the advent of the Spaniards, the Acolhuas were the most advanced and powerful of the allies, and they maintained their precedence to near the

end of the fifteenth century. But under a line of warlike kings the Aztecs extended their domain to both Atlantic and Pacific, and rendered the inhabitants tributary to them; and the magnificence of their capital and the extent of their domain made the Aztecs the representatives to Europeans of the civilized peoples of America.

The prevailing form of government among the civilized nations was a nearly absolute monarchy. In Tezcuco and Hacoapan the order of succession was lineal and hereditary; but in Mexico it was collateral and elective, the eldest surviving brother of the deceased monarch being generally elected to the throne, and when there were no more brothers the nephews were chosen, commencing with the eldest son of the first brother that had died. This order in the election at Mexico was not necessarily observed, as the electors, although restricted in their choice to one family, could set aside the claims of those whom they considered incompetent to reign. During the early days of the Mexican monarchy the king was elected by vote of the whole people, and even the women appear to have had a voice in the matter, but afterward the duty of electing the king of Mexico devolved upon four or five of the chief men of the empire. As soon as the new king had been chosen the body of electors was dissolved, and in their place others were appointed whose duties terminated with their first electoral vote.

The great advance of these nations over mere savages has no more enduring witness than their architecture, which proves them to have been intelligent builders. Whether the Aztecs were acquainted with our arch, with its vertical keystone, or not, is a mooted point, but it is not improbable that they were familiar with it in a primitive way. In the way of decorations they used balconies and galleries, supported by square or round pillars. Battlements and turrets, which at first were doubtless used for defensive purposes, at length came to be incorporated with decorative art. The barrenness of the walls was relieved by cornices and stucco work of various designs, the favorite figures being coiled snakes, executed in low relief. The serpents were sometimes placed in groups, as upon the temple walls in Mexico, and again they twined and twisted until head and tail met around every door and window of an apartment. Carved lintels and door-posts were common, and statues frequently adorned the courts and approaches. Glossy surfaces seem to have had a special attraction for the Nahuas, and they made their floors, walls, and even streets, extremely smooth. The perfectly straight walls of their buildings indicate the use of the plummet, and we are told that the line was used in making roads. The wood for roofs, turrets, and posts was either cedar, palm, pine, cypress, or oyametl. The different kinds of building stones used were granite, alabaster, jasper, porphyry, and a red, light, porous, but

hard stone, of which rich quarries were discovered near Mexico. A transparent stone resembling alabaster was sometimes used in the temples for window-glass. Adobes, or sun-dried bricks were chiefly used in the dwellings of the poorer classes, but burnt bricks and tiles are mentioned as being sold in the markets. Lime was used for mortar, and was employed so skillfully, say old writers, that the joints were scarcely perceptible.

Gold, silver, copper, tin, and lead were the metals used by the Nahuas; but though iron abounded it was unused by them. They worked their metals chiefly by melting and casting, but also employed the hammer to some extent. Copper, hardened with an alloy of tin, furnished them with cutting implements that would sever the hardest substances nearly as well as steel. But copper tools, however, were rare compared with those of stone.

No branch of Nahua art was carried to a higher degree of excellence than the ornamental working of gold and silver. Their artists in this line delighted especially in the imitation of birds, fishes, and other animals, giving them, it is said, movable heads, legs, wings, and tongues, and they could cast an object in different metals, each remaining distinct from the others. Thus a fish was moulded with alternate scales of gold and silver, and plates were cast in sections. After the Spaniards came the native artisans had a new and wide field for displaying their skill, in imitating the numerous products of European art. A slight examination enabled them to reproduce and often to improve upon the finest articles of imported jewelry and plate. And they seem, too, to have understood the art of plating with gold.

The Nahuas were also skillful workers of precious stones. All stones found in the country were used for ornamental purposes, but emeralds, amethysts, and turquoises were most abundant. The jewels were cut with copper tools with the aid of a silicious sand. Single stones were carved in the shape of animals and other forms. Mingled with the precious stones in the formation of bracelets, necklaces, and ear-rings, were pearls, mother-of-pearl, and bright colored shells. Articles of dress and armor were completely studded with gems, tastefully arranged. Mirrors of rock crystal, obsidian, and other stones were encased in rich frames, and were said to reflect an image as clearly as the best of European manufacture.

They were skillful weavers of cloth, employing cotton and rabbit-hair. The cotton fabrics were fine and white, while the cloths of rabbit-hair were said to rival silk in finish and texture. Feathers were inwoven with cotton for carpets, tapestry and bed-coverings. All the work of spinning and weaving was performed by women, and this, indeed, was their chief employment. Their paper, which was chiefly used for painting their hieroglyphic records upon, was made for the most part of maguey fiber, although other fibers were occasionally mixed in. The material was



probably pressed together when wet, and resulted in a substance like soft paste-board, having a smooth surface. Certain gums are said to have been used for the more perfect coherence of the fiber, and the paper was made into long, narrow sheets suitable for rolling or folding.

In the art of dyeing they have probably never been excelled by Europeans, and many of their dyes were introduced throughout the world, after the conquest. Cochineal was long used by them, and they were accustomed to feed the insect on leaves of the nopal. But plants were the main source of their brilliant colors; from these came shades of blue, indigo, red, yellow, and white. Nitre or alum mixed with ochre produced orange and other shades of yellow. The numerous dye-woods, which are now so largely exported from that region, were all employed by the native dyers. Many of the secrets of this art were probably never learned by the Spaniards.

All the branches of art among the Nahuas were placed under the control of a council, or academy; instituted to favor the development of poetry, oratory, history, painting, and to some extent also sculpture and work in gold, precious stones, and feathers. The center of all high art and refinement during the palmy days of the Chichimec empire was Tezcuco, and she retained her pre-eminence to a great extent down to the coming of the Spaniards; consequently Tezcuco's school of art is better known than others that probably existed in other cities. It was called the Council of Music, and no teacher of arts could exercise his profession without a certificate of qualification from the council. All pupils were brought for examination before the same body. The greatest care was taken that no defective work of a lapidary, gold-smith, or worker in feathers, should be offered for sale in the markets, and that no imperfectly instructed artists should be permitted to vitiate the public taste.

Great attention was given to oratory, for speech making was indulged in upon every possible occasion. Children at an early age were instructed in the art of public speaking, and some were even specially educated as orators. They were taught to memorize and declaim the speeches of their most famous ancestors, which had been handed down from father to son for many generations. Poets, though less numerous than orators, were honored just as highly. The emperor Nezahualcoyotl, who was the protector and promoter of all the arts and sciences, was himself a poet of great renown. There is little evidence to prove that their verses were written in rhyme, but it is said that due attention was paid to cadence and metre. By their system of combination a single word often sufficed for a line in the largest measure.

The Nahua system of numeration was very simple and comprehensive, and there was no limit to the numbers that could be expressed by it. The manner in which the numbers were written

was as simple as the system itself, which was essentially decimal. The correctness of their calculations and their ability to solve complicated problems is attested by the Aztec calendar, which is perhaps the strongest proof of the advanced civilization of the Nahuas. For ingenuity and correctness it equalled, if indeed it did not surpass, the contemporaneous systems adopted by European and Asiatic nations. The Nahuas were well acquainted with the movements of the sun and moon, and of some of the planets. They carefully observed and recorded eclipses and other celestial phenomena. They had an accurate system of dividing the day into fixed periods which corresponded somewhat to our hours. The civil year was divided into eighteen months and five days; each month contained twenty days which were divided into four groups, or weeks as they may be conveniently called. As three hundred and sixty-five days do not suffice to complete the year, the Mexicans added the missing thirteen days at the end of the cycle of fifty-two years. Another calendar, the ritual, was used for adjusting all religious feasts and rites. This, instead of being based upon the sun like the other, rested upon the movements of the moon. Its periods were of thirteen days each, thus representing about half the time that the moon was visible. The year contained as many days as the solar calendar, but they were divided into entirely different periods, so that in reality, there were no months at all, but only twenty weeks of thirteen days each.

The Nahua nations possessed an original hieroglyphic system for preserving all information that they deemed valuable. The art of picture writing was highly prized and zealously cultivated by them, being entrusted to a class of men who were much honored specially educated to this calling. The written records included national, historical and traditional annals, the names genealogical tables of kings and nobles, lists and tribute-rolls of provinces and cities, land-titles, law codes, court records, the calendar and succession of feasts, religious ceremonies of the temple service, names and attributes of the gods, the mysteries of augury and sooth-saying, with some description of social customs, mechanical employments, and educational methods. The preparation and guardianship of records of the higher class, such as historical annals and ecclesiastical mysteries, were under control of the highest rank of the priesthood, and such records, being comparatively few in number, were carefully guarded in the temple archives of a few of the larger cities. These writings were a sealed book to the masses and also even to the educated classes, who looked with superstitious reverence upon the priestly writers and their magic scrolls.

It is not necessary to go into the details of the social life and customs of the more southerly Maya nations to illustrate the very advanced position attained by them, as well as by the

Nahuas, over merely savage peoples. They had attained so much, by a spontaneous growth, in most of the fundamental branches which are characteristic of civilized peoples, that this term seems fairly to belong to them. But the name itself is not the essential point, it is the fact that they had attained a very considerable culture which is supported upon evidence that can not be overthrown.

H. H. BANCROFT.

San Francisco, Cal.

### PUGET SOUND INDIANS.

[FIFTH PAPER.]

#### LOCOMOTION AND TRANSPORTATION.

*Washington*  
*P. T.*

*Traveling by Water.*—This is the chief mode of travel by these Indians, as with the exception of the Chehalis Indians, their land is all situated on the shores or tributaries of Puget Sound. The Clallams own larger canoes and are better navigators than the Indians farther up the sound, as they live on the Straits of Fuca, where there is less protection from the ocean winds than in the upper sound. The following are the accounts of two trips which I have made with these Indians in canoes, for a distance of ninety miles and back, in which they had their own way in nearly all cases, and in which were exhibited most of their characteristics of this mode of transit. The trips were from Skokomish to Dungeness and return.

On Wednesday, January 30, 1878, I started with about sixty-five Twanas in seven canoes to attend a potlatch. We paddled until about noon, when it began to rain, and also to blow favorably, so that nearly all except those who steered were able to keep tolerably dry. A few had oil-cloth coats, a few used umbrellas, but the most used their common mats, which are almost waterproof. It was rather comical to see a number of persons, mostly women and children, sitting in a canoe with a mat stretched over them, extending almost from one end of the canoe to the other. From a side view only their heads were visible. Towards evening, after traveling seven and a half hours, we arrived at Seabeck, where all of them stayed in Indian houses.

The next forenoon it rained heavily, so that they did not start; and at noon, although it had stopped raining, they determined not to go on that day, giving as excuses that there was a head wind, that they could not reach any house by night, and that if it should rain at night they would get wet, and that they were afraid that they would be the first to reach the potlatch, which they did not wish: hence, I saw that it was useless to urge them. They spent the afternoon in gambling, and in getting

ready. Some of them made a fire of pitch-wood and cedar on a board. Then, putting their canoes on blocks about a foot high, they put the fire underneath, moving it along the whole length of the canoe, so as to burn off all of the moss and other material which might have accumulated on the outside of the canoe. They do this because the canoe will run more easily after this is removed.

On Friday morning they set the time to start at half past seven o'clock, but at seven a messenger came for me, saying that they were all ready. I hurriedly ate a little breakfast, and went to their place of lodging. Four of the canoes had gone, but the one in which I was traveling was not even loaded. It took not less than fifteen minutes to load it; then it was said that a young man of their company was sick, so they stopped to doctor him with their incantations, and it was half past eight before we started. One more canoe with ten persons was here added to our company. The wind blew quite strongly and favorably, at times as much as our crafts would bear. There was, however, a fellow feeling among all, for no single canoe of either set of four was allowed to be far away from the rest, for fear of some accident. If one could not keep up, the rest waited for it. In eight hours we traveled about thirty-five miles, and arrived at some Indian houses, within three miles of Port Townsend, where all camped. It had rained all day. We did not stop for dinner, but all ate a little lunch at noon in their canoes. At morning and night they ate warm meals. The next morning they had a short tamahnous to obtain fair wind and weather. It consisted of singing, pounding on the drum and on sticks. About eight o'clock we started and in an hour reached Port Townsend, where the Indians spent nearly two hours in purchasing things to present to the principal men at the potlatch. We then proceeded, having a pleasant day. At one time quite a race took place, in which nearly all the canoes took part. As there was very little wind, it was mainly a trial of strength and endurance, and was done for mere sport. It was kept up for two or three miles, until one canoe had passed all the rest, and the losers were satisfied that it was useless to contest longer with it. That evening we reached our destination about half past five o'clock, having made the entire trip in twenty-two traveling hours.

We set out on our return to Skokomish on the eleventh of February. It was eleven o'clock before we started, and the Indians intended to travel only six miles, camp at Sequim and visit those Indians; but the wind and weather proving favorable they passed Sequim bay without going into it, and camped within five miles of Port Townsend. They would have gone further, but the wind was blowing so strongly that they were afraid to go around Point Wilson, which is a dangerous place when the sea is rough. Here they camped out, away from houses, the first

time during the trip. In the summer they often do this, but in the winter they do not like to do this, especially if the women and children are along. It was a calm night and they did not make much preparation for camping. Some of them slept in their canoes, but most of them lay on the ground, a part of them fixing up their sails to shelter themselves from the wind.

The next morning I was up at six o'clock, and called them, but they heard the wind blowing, and thought that it would not yet be safe to go around Point Wilson, so they did not get up. But in an hour it had calmed down, so they concluded to go, and fearing that the wind would rise again (and it did soon after) they started without any breakfast, and went to Port Townsend, where they stayed until noon. After this most of them went three miles further and camped, but the owners of a few smaller canoes feared to cross the bay, for it was quite rough. As I had business in town, and my companions wished to dig clams during the rest of the day for the journey, the delay was acceptable.

We started about eight o'clock on the following morning, and to shorten the distance, some of our party took another route, where we were obliged to make a portage. Often in doing this, when there are only a few persons along, they unload the canoe, and take the articles and canoe across separately. This time, however, there were so many present that they were able to drag the loaded canoes across, having first laid sticks down on the ground, across which they were hauled. During the day there was another race, similar to the one already described. We reached Port Gamble about two o'clock in the afternoon, and some thought it best to proceed, but the Port Gamble Indians invited my companions to spend the night with them, and partake of a small feast, which invitation they concluded to accept. They feasted chiefly on potatoes and rice during that afternoon and evening, sitting around a few kettles of rice and taking the food out with their large ladles. One man said that he ate three times during that evening. After dark the women assembled in one house and sat down in two rows, opposite each other, when they sang for an hour or more, accompanied by drumming and pounding on sticks. When this was over two of the Port Gamble women made presents of from five to twelve yards of calico to each of the Twana women; and after nine or ten o'clock some of the Twanas and Clallams of Port Gamble began to gamble and kept up their game until three o'clock in the morning.

The next morning there was another feast, which consisted of bread, crackers and coffee, and as they could not eat it all, some of it was carried away. It was half-past ten o'clock before we fairly left Port Gamble. We hoped to reach Seabeck, twenty miles distant, by night. But soon after starting we met a strong head wind, which grew stronger and stronger. Sometimes, especially in rounding points, we were obliged to use poles to push

the canoes, and they aided very materially, as it was very difficult to get along without this kind of help. The Indians seldom carry poles for this purpose, but generally use some poles belonging to their sails. About three o'clock in the afternoon most of the Indians gave up, tired out, and encamped. Only one canoe reached Seabeck that night, and that was the one which belonged there. The rest were scattered singly and in groups of from two to four for a distance of four miles, some of them having got only about half way to Seabeck. Our canoes were not all together again after that, but the Indians were now in familiar waters and felt uneasy about each other's safety no longer. I was camped with a part of four canoes. The wind blew violently that night, the trees were falling constantly near us, it rained hard and it was with great difficulty that we made a fire. A few had tents; others arranged their sails for shelter, and the rest arranged their mats on poles placed in the ground so as to lean in a slanting direction, and thus they kept off most of the wind and rain.

About three o'clock the next morning an unusually high tide arose, covering all the beach where we were encamped, and compelling us to leave, the water rising from six to twelve inches in our camp before we could get all of our things into the canoes. We went to Seabeck for our breakfast, reaching that place by seven o'clock. That was a cold morning ride, as we were wet, the wind blew somewhat against us, and we had to take turns in rowing and paddling in order to keep from suffering with cold. Other canoes came in later. We remained at Seabeck about three hours and a half, in order to get comfortable, and then again started, and although there was some head wind, we traveled fifteen miles more before five o'clock, about which time we made camp. Six of our canoes were now in company, the other one remaining in Seabeck for the day. That night I witnessed a silent tamahnous over a sick woman.

We encamped on as high ground on the beach as we could find, but the next morning about four o'clock the tide was so high as to compel us to rise for fear of being drowned out; but the water came only to the edges of our beds. Some of the canoes started about five o'clock and reached Skokomish about half past ten, having a fair wind a part of the time. Others waited till after daylight and breakfast, and did not arrive until two or three hours later. Thirty-three hours were occupied in traveling on our return trip.

The following are a few items in regard to another trip which I made over the same route in July, 1876 with this important difference in circumstances: that it was with one canoe and in the summer, instead of with many canoes and in the winter.

With one man to steer, one to row and two women to paddle, we left Skokomish about six o'clock in the morning, but nothing

occurred worthy of interest during the day, and at six o'clock we camped on the beach without tents, having traveled thirty-five miles. The next day the crew wished to start early, and I gave them permission, so we were off about three o'clock in the morning. They took a cold lunch about seven o'clock, and we were at Port Townsend, thirty-five miles from the night's camp, by four in the afternoon. The wind, however, was so strong around Point Wilson that they dared not venture, although they were accustomed to the waters, as they were Chalmers, and these were home waters. The next day the wind blew so strong that we were obliged to camp there all day. The following day the wind died down and they wished to go, but as it was the Sabbath I forbade them. On Monday morning at two o'clock we again started and arrived at Dungeness at eight o'clock, having traveled twenty miles that morning. We had no favorable wind during the whole trip, though when we traveled we had but little head wind and made the ninety miles in thirty-one traveling hours.

In returning we left Dungeness at four o'clock in the morning and were at Port Townsend by ten o'clock, where we remained four hours. We then set out for Port Gamble and reached that place—twenty miles—by half-past six in the evening. There we remained for the night with the Indians of the place. The next morning, because of missionary work, we did not start until nine o'clock, and during the day we were detained two hours for the same reason, so that we traveled only thirty-two miles during the day. The following day by one o'clock P. M., we reached home, eighteen miles further, having had a favorable wind most of the time. We made the whole distance in twenty-three traveling hours.

I have traveled a few thousand miles with them in their canoes, but usually they have had to travel so as to suit my convenience, but in the above two trips I let them have their own way in the main.

I once went thirty miles in five hours in one of their canoes before a strong wind. A part of the time we used two sails, but at last the wind was so strong that we were obliged to take down one of them. But the quickest trip I ever made was a sail of eight miles in one hour. At both of these times I had good canoes and experienced navigators—Clallams—else it would not have been safe. Few of the Twanas would have dared to sail in such winds.

In addition to the tamahnous, or incantations for wind, mentioned in the first of the above trips, they would formerly, especially in a calm, when they wished for a fair wind, pound on the canoe with their paddles or strike the water with them, spattering it forward, and at the same time whistle to induce the spirits to favor them.

Their travels were formerly confined mainly to the places where those reside, among whom they are inter-married. Since the coming of the whites a few have been to Oregon, where a few of their children are at school, and a few have been on sailing vessels to California. These distant travels, and knowledge which they have gained therefrom in regard to the whites of the more thickly settled regions, have been of great advantage to them.

*Canoes.*—These are “dug-outs” made from cedar trees. In making them they formerly burned them out, finishing with their hand adzes of stone. But now they universally use American axes and adzes in the first part of the work, and the hand adzes of rasps for the second part, although the finishing touch is sometimes put on with the curved knife, described in the same chapter. After this they are steamed, by filling them with hot water and throwing in heated stones to keep it warm, so that they can spread the sides further apart, and fastened thds with cross pieces, or thwarts, which are round or flattened, and an inch and a quarter to two inches in diameter, the size varying with the size of the canoes. Holes bored through the end of the cross pieces, and the sides of the canoe admit ropes of cedar, which hold the cross pieces in position. A rim is made for the upper edge of the canoe, about an inch in diameter, which can be replaced when worn out. This is generally of fir—a harder wood—as the wear on the rim is considerable in paddling.

The canoes in use are of three kinds :

1. The large canoes, often called Chinook canoes. These are made chiefly by the Indians of British Columbia, and imported, but they are used very extensively by all the Indians on the Sound for carrying large loads and for dangerous traveling. The one from which the figure is taken—one of good size—cost a hundred dollars when new. It was thirty-five feet long, five feet wide at the center, with a perpendicular height from the ground of three feet at the stern (a), two feet three inches a foot from the stern (b), one foot, ten and a half inches a quarter of the distance towards the bow, and in the middle (c, d), two feet at a place six feet from the bow (e), four feet six inches at the top of the head a foot from the end (f), and four feet one inch at the extreme end of the nose (g). There are two places for masts—near the middle (i), and near the bow (h). Near the stern (k) is a seat for the one who steers. The head of this kind of canoe is a separate piece of wood. Such canoes are made both larger and smaller than the one here described—the largest of which I have known, being the one exhibited at the Centennial at Philadelphia in 1876—which was sixty feet long and eight feet wide. None as large as this, however, are used on Puget Sound, the largest which I have seen among them being thirty-six feet long, six feet wide and three feet



deep. The smallest that I have seen was about eight feet long, but these small ones are not common. In traveling in these I have never learned that there was any special place for any person except in regard to the steersman. He formerly was a slave. When time with them was worth very little they preferred to wait for favorable winds. They put a slave to steer, wind or no wind, he must always be at his post.

(2.) The Shovel Canoe. These are scarce among the Twanas and Clallams. They are used in much the same manner, and made about the same size as the next kind, and differ from them mainly in that the ends are from a foot to a foot and a half wide, instead of ending at a point.

(3.) The Twana Fishing Canoe. These are very common, and are made by all the tribes on the sound. They are entirely of one piece of wood, except that some have the movable rim, mentioned as being on the large ones. They are used for fishing, hunting ducks, traveling on rivers, and even on the sound, when it is calm and they wish to take only a small load. I have traveled thirty miles in this kind on the sound, though we preferred to keep near shore when possible. Still I have crossed Hood's canal in one when there was considerable wind, and we were in the trough of the sea, for the larger ones will stand quite large waves. They vary in size from about twelve to thirty feet long, from twenty to forty-eight inches wide, and nine to twenty inches deep in the center.

Sometimes two of the larger canoes are fastened together side by side, and covered with boards, in order to carry a large amount of hay, or ferry a horse for a long distance on the sound; but not for crossing rivers, as there are none in the country so wide that a horse cannot swim across them.

I have never known any of these Indians to use the Haida canoe, although the Haida Indians often roam over these waters in them. They are made with the stern much the same shape as the bow, so as to better ride the great waves of the ocean, instead of being square at the stern as in the Chinook canoes. It seems a little strange that these Indians should not occasionally get them, since they are so well adapted to rough waters, and the lower Clallam waters are about as rough as the ocean, and since they import the Chinook canoes from the British Columbia Indians, but so it is. As far as a Haida canoe is seen, so far it is known that no Puget Sound Indians are in it.

*Boats.*—A few of these Indians own skiffs and boats of American make, though I have never known but one of them who could build such boats. He was brought up with his stepfather, a white man, but never had much instruction in the art, picking up enough knowledge, as he studied boats, by taking them to pieces and watching ship-builders at work, to build both skiffs and a sloop. The Indians generally prefer their canoes to boats, as they are lighter and more easily managed,

and the larger ones are safer in rough waters than boats. The smaller ones tip easily, but being accustomed to them from infancy, they seldom upset.

*Paddles.*—The common man's paddle most generally used on Puget sound is about four and a half feet long, with the blade two and a half feet long and five inches wide at its widest place. The women's paddle is a little shorter and broader in the blade, as the stroke of the men is deep and pushing, while that of the women is quicker and more slashing. These are generally made of maple.

The Makah paddle is imported from the Indians of that tribe, and used considerably by the Clallams and a little by those tribes farther up the sound. The larger ones are about five feet long, with the blade three feet long and seven inches wide, though many are smaller. They are used by the sound Indians often in steering, especially in rough waters. They are commonly made of yew. Once in a long while a Haida paddle is seen among the Clallams. The large ones are five and a half feet long, with the blade three and a third feet long, by six inches wide. They differ from those already described in having wider handles and round instead of pointed ends. Some of them are very fancifully painted, though I do not know that I ever saw one of these fancy ones in use; they are generally painted to sell.

The Chehalis, or river paddle, is about the same size as the kind first described, in common use, though fully as long, but it differs from it in that the end of the blade has a piece cut out so as to leave it somewhat in the shape of the letter U. They use them with advantage in rivers where logs are numerous, the end of the paddle fitting on to the log and so enabling the rower easily to push the canoe away from it. They are not, however, in common use on the Sound. They get their name from the Chehalis Indians, who live on the river of that name.

These four are all the varieties I have seen in use among these Indians.

*Oars.*—They knew nothing of these until the whites came. Row-locks either of wood or iron are now fitted into most of the larger canoes, so that one or two pair of oars can be used, but paddles are also used in connection with them. In dangerous waters they lay aside the oars and use the paddles entirely as being safer. They often make these oars of fir or cedar, but sometimes buy them. The small canoes are propelled entirely by paddles.

*Sails.*—These are used with the larger sized canoes of all kinds, and the largest canoes often have two sails. Formerly the cedar bark mat were used, but these are now entirely out of date, and those of cloth, fashioned and fastened after the style of American skiff sails have taken their places. Many a

sail has been made entirely of flour sacks, and the flour brands on them in every shape sometimes look rather comical.

*Poles.*—In traveling against a strong wind, especially around points of land near shore, where the water is not deep, or when ascending a swift shallow river, poles about twelve or fifteen feet long are often used very effectively for pushing. Generally they are poles connected with the sails.

*Rudders.*—They have not yet adopted the American style of fitting rudders to their canoes, but prefer the old way of steering with the paddle, for they can steer and paddle at the same time, and the shape of the stern of the fishing and shovel canoe is not well adapted for fitting rudders to them. A rudder might be fitted to the stern of the large canoes quite easily, but only once have I seen this done. Usually the best paddle is used for steering. The steersman is in these days selected according to circumstances. If the water is rough, the strongest and most experienced navigator steers, but if the rowing is hard and the steering easy, the strongest person is put to rowing, while the weaker one, perhaps a boy or woman, steers. I have more than once been in canoes when it required two persons with oars to steer.

*Anchors.*—These formerly were made of stone, but now some kind of old iron, probably some large ring, is used. The only stone anchor I have ever seen, though others similar to it were formerly used, was found in a shell bed and burying ground at Doswailopsh, on Hood's Canal. It is evidently a natural stone, except that the groove around the middle, around which the rope was fastened, was hammered out with other stones. This groove is about two inches wide and a little over half an inch deep. The anchor is about fourteen inches long, seven and a half wide, four and a half thick, and weighs twenty-five and a half pounds.

Mr. E. P. Brinnan, of that place, who found this one, also told me that many years ago he found another near the same place, which has been lost. It was somewhat in the shape of a grindstone, about a foot in diameter and four inches thick, with a hole through, much nearer one edge than the other, for the rope.

*Bailing Vessels for Canoes.*—These are of three kinds. (1) Of wood. This is usually from five to seven inches wide, about nine long, exclusive of the handle, which is three or four inches long and an inch in diameter, and it is from an inch to an inch and a half deep. The dipper is diamond-shaped. (2) Of wood, and alder is preferred in making both this and the previous kind. It is rectangular in shape at the rim, the sides and ends tapering almost to a point inside. It is about ten inches long, six wide and two and a half deep. It has no handle. There is a groove nearly half an inch deep at the bottom on the outside, and the hand is clasped to this and

the rim. (3) Of cedar bark. This style is not often used. The handle only is of wood. It is about six inches long and four and a half across, with a depth of near an inch. It is shaped like about an eighth of a cylinder, just as the bark is taken from the tree. This bark, after being taken from the tree, has about four inches of each end, bent at right angles, and gathered and fastened to a stick, which is parallel with the main part and is the handle. The hand is often used also in throwing water out of canoes, and sometimes it is thrown out with a paddle.

*Traveling on Foot.*—Commonly they travel only short distances on foot, seldom more than ten or twelve miles, except when hunting. In coming to the Twana potlatch of 1878, however, the Quinaielt Indians came about one hundred miles, chiefly on foot. There was too much land travel to allow them to come in canoes, and a little water travel, enough to prevent their using horses, even if they had owned them.

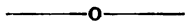
In their short journeys, however, they, especially the women, often carry large loads. In doing this they take the carrying straps, tie the ends, which are several feet long, around the load when it is of wood, mats and similar articles, or into the handles of baskets when filled with potatoes, fish, apples, and other small things, then they put the load on the back, place the flat part of the strap around the forehead and move along. Formerly these straps were made of some tough bark, braided, and were of the same shape as those now used, but with hardly any artistic work. Now they are of strings and colored rags woven. The strap is from a foot to a foot and a half long, and from two to three inches wide with the rope at each end perhaps five feet long.

*Snow Shoes.*—These are scarce, and are not often used, except when hunting in the mountains in winter, as the snow does not usually lie deep and long on the shores of Puget Sound. They are commonly oblong, fourteen by eighteen inches, with a rim of hazel wood, across which thongs of hides are stretched. The heel is near the center the toe extending to the edge. It is fastened to the foot by means of thongs.

*Land Conveyances.*—Horses are used much more by the Twanas and other Indians up the Sound than by the Clallams, whose land is so mountainous as not to admit of them being used very successfully. Previous to the coming of the whites water travel was so easy and roads so poor, owing to the heavy forests, that they did not use them much, if at all, and so took very little pride in adorning their saddles and horses with trappings. Since the country has been settled by Americans, they have adopted the saddles made by them, which are also without trappings. Occasionally their horses are shod, but not usually. Sleds have long been used, but wagons are gradually being used by them as they get rich enough to buy them.

For some reason the word for horse, sti-a-ke-o, is evidently derived from the Nisqually word for wolf, stuk-ai-o, probably because it looked more like that animal than any other which they knew. So some of the tribes east of the Cascade mountains named the horse after the dog. This same word, Steakeo, is used by the Chehalis Indians and all the Indians directly on the sound, except the Makahs and the almost extinct Chemakums. The plurals, however, vary in the various languages. I presume from the derivation of the word that the animal was first known to the tribes speaking the Nisqually language, perhaps coming across the Cascade mountains from the Klikitat Indians, and that these tribes introduced them to the other tribes.

M. ELLIS.



## ARCHÆOLOGY AND ETHNOLOGY OF MICHIGAN.

The recent appearance of the book entitled "Memorials of a Half Century," by Mr. Bela Hubbard has given rise to the inquiry in reference to the archæology and ethnology in Michigan. The state is divided into two portions—the upper and the lower peninsula. The lower peninsula partakes of the character of Ohio and Wisconsin, while the upper peninsula differs essentially from it. Geologically considered the lower peninsula is covered with remains of the glacial period, a series of hills, composed of rounded domes, conical peaks, short sharp spurs, winding ridges, mounds, knolls, and hummocks, with accompanying depressions which are known as potash kettles, pot holes, sinks, and cat swamps. Prof. A. Winchell says that west of lake Erie the moraine consists of a series of great loupes concentric with the great lakes and the principal bays, and that each of the principal and subordinate basins had its separate glacier sheet which formed loops in the moraine system. The northwesterly trend of the moraine follows the isothermal line through Michigan, Wisconsin and Minnesota. three state universities are located on the terminal moraine: The university of Michigan at Ann Arbor, of Wisconsin at Madison, and that of Minnesota at Minneapolis. The presence of the bones of the mastodon in this terminal moraine is noticeable. Three skeletons have been exhumed in Orange county, New York: One at Cohoes Falls, on the Mohawk; one in New Jersey, one in Indiana, one near Newburg, N. Y., one near Tecumseh, and another in Cass county Mich. The Tecumseh mastodon was buried in a small bog with only eighteen inches of peat over it. In the same county arrow heads are found seven feet beneath the surface of the peat. The mastodon probably survived to the recent epoch.

Mr. Hubbard describes the topography of Michigan and says: "The lower peninsula, bordered by three of the great lakes, partakes of the general undulating character of the Mississippi

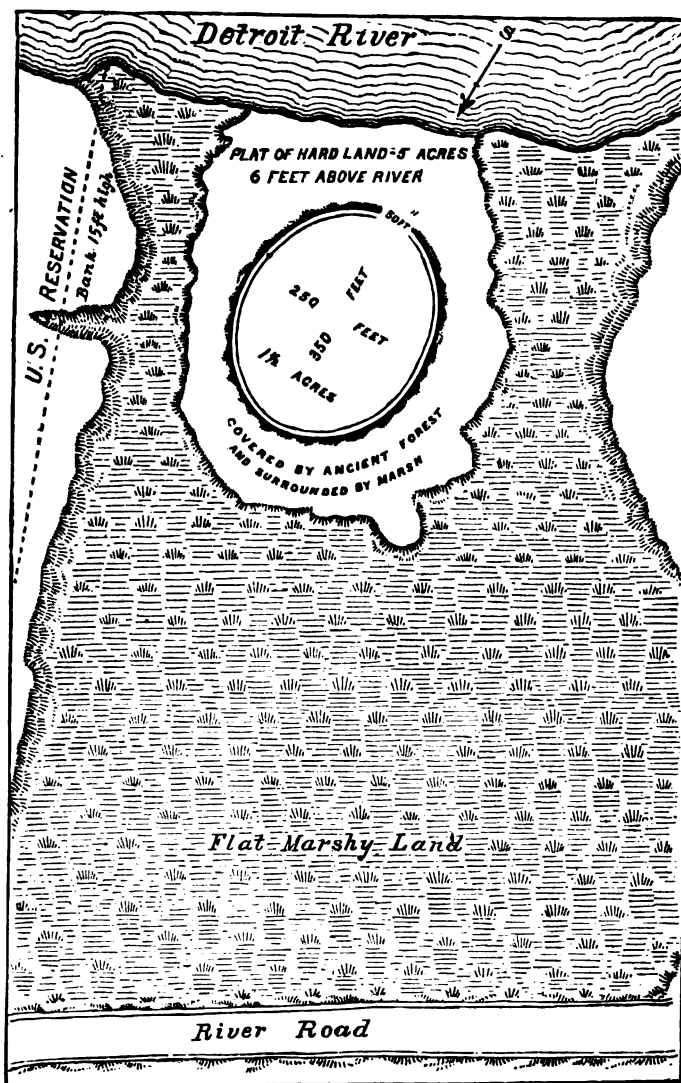


FIG. 1—OLD FORT NEAR DETROIT, MICHIGAN.



valley. It combines the variety of woodland, glade and water in a manner which often seems the result of art, but which is inimitable. In the southern part of the state a few rolling prairies occur, the largest being eighteen miles in length." He speaks of the magnificent pear trees which grew on the banks of the St. Clair river, and of apple trees found among the forests in the northern part of the state planted by the early French settlers, and Prof. Winchell says that the effect of the water on the climate may account for the abundance of fruit in this region as well as in Northern Ohio and in New York state. The correlation of the soil to the gravel beds and the products to the soil in all of these states has been noticed, but the correlation of the tokens of the prehistoric races are to be noticed. Michigan has not, so far as we have ascertained, yielded any paleolithic relics, but the people who dwelt here in prehistoric times seem to resemble those who dwelt elsewhere, and are not unlike modern Indians.

Mr. Hubbard says: "Few works of a prehistoric people comparable to those found in Ohio and elsewhere to the southward occur in Michigan. There are no truncated mounds, no long earth-built walls, no large circles and squares, and pyramids; nor are there any defensive works on so grand a scale as those in the Ohio valley. Some of the works have a similar character to those found in the vicinity of Lake Erie and in New York. They consist of embankments with outer ditches, or are built across the necks of upper lands between ravines." Mr. Hubbard mentions one such defensive enclosure in Macomb county on the Clinton river, not far from Romeo. It consisted of a circular embankment forty-five feet high and enclosed about three acres. The diameters were 350 and 400 feet. The three openings or gateways were protected by a mound situated within the line of the circle. The embankment may have been crowned with palisades and the interior mounds may have served for observation. A similar enclosure to this exists near Spring Wells, on the Detroit river, three miles from Detroit. It consists of a low embankment enclosing about one and one-half acres, the enclosure having a diameter of 220 feet by 250 feet. It is situated upon firm land surrounded by a morass, but there are traces of parallel walls which may have formed a covered way across the morass. (See Fig. 1.) We call attention to this enclosure, as it is a typical one for the entire region. Mr. Henry Little has mentioned an ancient work in Gilead, Branch county, Michigan, and another at Three Rivers, St. Joseph, Mo., which resembles the defenses found in Northern Ohio. He mentions also an excavated ring or ditch without the corresponding embankment, situated on Climax prairie.

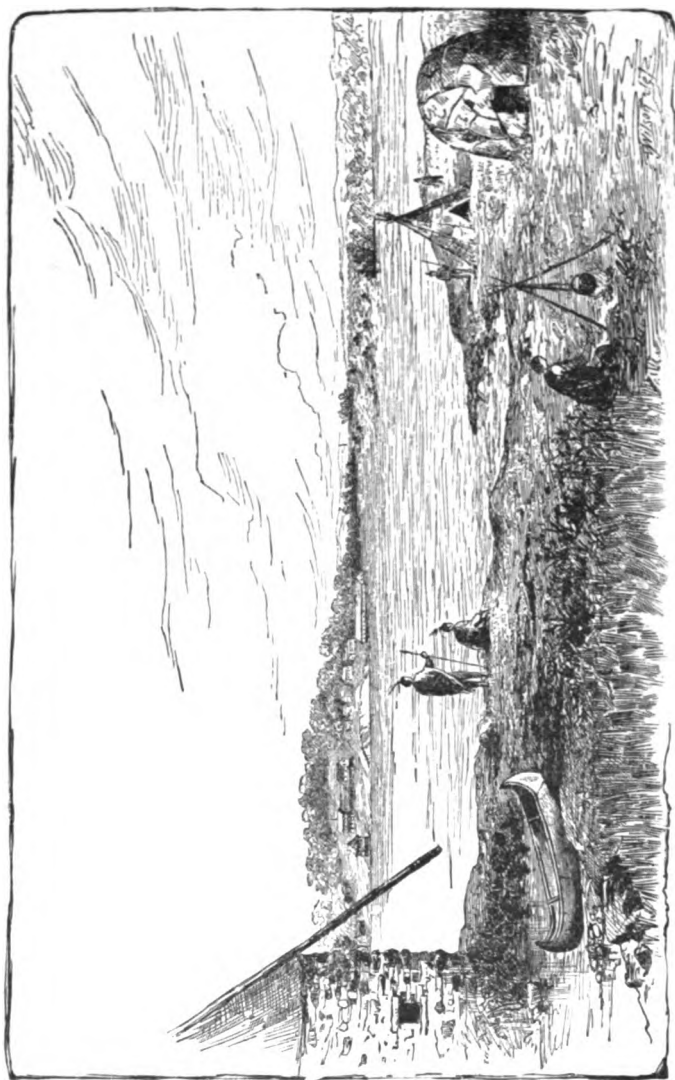
The mounds or tumuli of Michigan are described by Mr. Hubbard. He says by far the finest group of mounds that has come to my knowledge occurs on the banks of the Grand river three



miles south of Grand Rapids. The group occupies the first terrace which is overflowed in high water. The largest of these mounds has a diameter of 100 feet, and a height of 15 feet; close by are two others of nearly equal size; around them cluster seventeen smaller mounds varying in height from eight to two feet. The mounds were opened and relics taken from them: stone arrow and spear heads, several copper needles, a copper axe eight inches long, four inches wide, one-fourth thick, several stone pipes and four handsome pots. In several places stone mounds have been found. One of these stone mounds was opened and found to contain a skeleton. The tumuli in Michigan are nearly always found in some picturesque situation, on or near the banks of the larger streams. The most notable mound is the one on the River Rouge, three miles below Detroit. (See Frontispiece.) The mound was originally 700 or 800 feet long, 400 feet wide, 40 feet high, and bordered on the river for its whole length. It was symmetrical in form, and the slopes were about as steep as the sand, of which most of it was composed, could be retained. The situation was picturesque. At the base lay the deep waters of the River Rouge, a natural meadow stretched out half a mile to the Detroit river which was visible for many miles of its course, above stretched the straits, while north of it the view commands many miles of rolling country. The tumulus must have been visible from a great distance in every direction. This mound has been the depository for several races, the earliest having buried their dead lowest down, but later tribes of Indians, such as the Hurons and other Algonquins deposited the bones of their dead in immense quantities. After the advent of the whites it became a place where burial was occasionally practiced. Mr. Hubbard thinks that in all probability it was an altar mound, as charcoal and ashes were found mingled with burned bones. With these were many pieces of large pots, but many were broken. Cremation was practiced by the Mound builders of this region. In company with Mr. Henry Gilman, Mr. Hubbard explored this mound and exhumed from it a skeleton which was found in a sitting posture three feet below the surface.

A race also dwelt in Michigan which may be called proto-historic. It is composed of the different tribes of Indians which occupied the region around the great lakes at the time of the discovery, mainly of the Algonquin stock. Some maintain that this is the same race which built the mounds. On this point we shall have no contention. The earth-works in Michigan, Ohio, and New York State resemble one another very much. They consist of rings with the ditch upon the outside, sometimes upon the inside, probably the remains of old stockades. Many of the mounds or tumuli have yielded relics which might well be considered as the relics of the Algonquin race. It is a question however, whether, there are not tokens of a race which preceded

first ter-  
of these  
et; close  
cluster  
it to tw.  
them.  
oper are  
several  
s stone  
is was  
can  
is the  
n dis-  
400  
whole  
about  
ld be  
e  
nd  
many  
if it  
lus  
on  
est  
of  
be  
of  
c-  
ar  
d  
y



**FIG. 2—INDIAN ENCAMPMENT AT SAULT ST. MARIE.**

them. As we go west of the lakes into Wisconsin we find the emblematic mounds and the fragments of the Dakota tribes. Here the mounds and the proto-historic tokens differ from those east of this line. We find, however, the copper mines in Northern Michigan, a region which has been traversed by Siouxs or Dakotas, and Chippewas, who were Algonquins, and it is still uncertain whether the mines were worked by the last named people or not. It is probable that they were. We present a picture in the cut, Fig. 2, of the habitations of this people. It is expressive of their mode of life, the canoe, the tents, the fire with the cooking party, all show that they were a wild people. Different tribes built different kinds of tents. The Chippewas used the round tent covered with bark. The Pottowatomies built the peaked tents covered with skins or rush mats. The Chippewas use, at the present time, birch bark canoes. The mode of burial practiced by these tribes since the beginning of history differs essentially from that practiced in prehistoric tribes. The Pottowatomies and the Menominees bury on the surface and place slabs over the grave. The Chippewas bury in the ground and build little houses over the grave with floors on which to deposit food and offerings to the spirit of the dead. They place the totems of the clan at the gable end of the houses. The tokens left by the Algonquin race since the date of history are very different from those of the mound builders who lived in prehistoric times. There is a wide gap between the tokens if the race was the same. This is significant. The native races evidently borrowed from one another, and after the discovery borrowed from the white man. We have to eliminate everything which has been intruded before we can ascertain either the race or the age. Silver crosses, iron muskets, glass beads, brass hawk bells, medals of various kinds, brass kettles, iron axes, iron bales for copper kettles have been found in the corn fields among the mounds and even in the tumuli, so that we may say that the mounds were built subsequent to the advent of the white man, but the debris of camps and the traces of camp fires, with the skeletons of tents, show how recent Indians may occupy the very places where the mound builders formerly dwelt.

We think that this review of the tokens of the lake region will convince our readers that different tribes and perhaps different races have occupied the same localities and have left their tokens beneath the soil. The record is to be drawn out from the gravel beds, from the caves, from the peat swamps, from the mounds, from temporary camps and graves. Some may prefer to run the races together and say that there are no divisions, but this is mainly conjecture. The tokens are certainly different, and, for the present, must be ascribed to different races. When the record is more complete we may be inclined to say that there is a continuous line, but for the present it is broken into fragments. S. D. Peet.

## THE TRIBAL DIVISION OF THE ESKIMOS OF NORTH-EASTERN AMERICA.

Recent writers have expressed some doubt as to the existence of tribal divisions among the Eskimos. From this point of view it may be of interest to add a few remarks on the tribes of the central Eskimos to Dall's researches on the tribal divisions of the western Eskimos.

The languages of all tribes from Greenland to the coast of Behring Straits differ only very slightly. Though awarding to Dr. Rink's researches the larger stock of radicals is common to all of them, there exist quite a number of roots in the western dialects which are unknown to the central Eskimos and Greenlanders. A point, however, which I observed during my stay in Baffin Land, led to supposing a closer relationship between the distant tribes. In Greenland and northeastern America the Angaskut use in their conjurations a great number of words which do not occur in the common language. Part of them are symbolical, the greater number, however, are obsolete radicals. Some of them are still in use among the tribes of Alaska, and some are still found in Greenland. They prove the existence of a close relation of the dialects in olden times.

Though the language of neighboring tribes is almost identical, a comparison of customs, traditions and religious ideas will enable us to distinguish a few larger groups of tribes. Our knowledge of the traditions of the western and Mackenzie Eskimos is too scanty to allow a comparison with those of the Central, Labrador and Greenland tribes.

A thorough study of the material furnished by many observers leads to the following division of the central tribes:

The inhabitants of: 1, Adelaide Peninsula, King William Land, and Porthia, Felix and Pelly Bay; 2, The mouth of Park River; 3, Wager River, Repulse Bay, Fury and Hecla Strait, east coast of Fox Basin; 4, Chesterfield Inlet; 5, North shore of Baffin Land and North Devon; 6, Ellesmen Land; 7, West shore of Baffin Bay; 8, Cumberland Sound; 9, Frobisher Bay, Middle Savage Islands, and central parts of Hudson Strait; 10, Kings Cape; 11, Southampton Island.

Dr. Rink includes the tribes of Labrador in another group. The similarity, however, of the tribes north and south of Hudson Strait is so striking that I should prefer to include the central and Labrador Eskimos in one group. A more precise decision must be postponed until Mr. L. M. Turner's researches at Ft. Chimo will be published, which will afford ample information on the little known tribes of Ungava Bay. The Moravian missionaries of Labrador report three tribes in that bay: The Kangivamint, of

George river; the Koakramint, of Ft. Chimo, and the Ungavamint, of Hope Advance Bay. Besides these the Thiviment, of the east coast of Hudson Bay are mentioned. Their proper tribal name is unknown, Thivimint signifying the inhabitants of the coast beyond the land. They are identical with the Iglumint, *i. e.*, the inhabitants of the other side of the nations of Baffin Land. The inhabitants of Ungava Bay may be included in a twelfth group, and not with the others mentioned above.

In comparing the implements, clothing and huts of these groups of tribes we find considerable differences. The wide clothing and the high boots of the Ponds Bay nation is not used by the southern tribes, who wear short breeches and small-hooded jumpers. The bunch of hair protruding from the forehead of the southern tribes is not in use among the northern, while the women of some tribes west of Hudson Bay have rings around their eyes, those of Baffin Land have only several pairs of lines on the cheeks and chin. There are some indications, however, of more uniform customs and fashions in olden times. For instance, the Angakut of Cumberland Sound wear at certain parts the hairdress used by southern tribes, and a tradition refers to a tribe leaving Cumberland Sound to go north and change their hair dress and the cut of their jumpers on that occasion.

The Eskimos themselves have separate names for all tribes and call them from the place or the country in which they are located. The division of the population in tribes is somewhat obscured by frequent intermarriages. The man joins his wife's family, and thus members of one tribe become frequently settled among another one, and a friendly intercourse between neighboring tribes is easily established. Strangers, however, must adopt the customs of the tribe they visit. Among more distant tribes, where there are few ties of consanguinity and affinity, there exists frequently a deep distrust. Visitors must go through a long ceremony before they are allowed to enter the huts. The details of the ceremony are not the same everywhere; among all tribes, however, it is a kind of duel and a game of hook and crook between the new comer and one of the natives. Originally the defeated combatant was at the mercy of the enemy. This custom still obtains among the tribes west of Repulse Bay. For this reason the intercourse between distant countries is somewhat restricted.

By comparing the available material, we find that the Eskimos of Labrador, northeastern America as far as Adelaide Peninsula, and North Greenland form one homogenous group, which is subdivided in numerous tribes, whose customs slightly differ from each other. Their character, however, is so different from that of the Greenlanders and their western neighbors that they must be included in one of the large groups of Eskimo tribes.

FRANZ BOAZ.

## Correspondence.

---

### A STRANGE WAY OF PRESERVING PEACE AMONGST NEIGHBORS.

*Ed. American Antiquarian:*

The following strange story I found in the summer of 1884 while on a visit to the part of the country where these people lived. I send it to you for publication, believing it worthy, from its interest, of being preserved.

On the west coast of Hoiduk Land, (Queen Charlottes Islands), B. C., where the storm driven waves from the broad Pacific roll in with relentless fury, lived, until lately, four tribes, inhabiting as many different villages, a wild, daring people, whose very nature seemed moulded by the wild waters on which they depended for a living. These waters abounded with whales which frequently came into the long, shallow bays and inlets which indented their coasts. To those people a whale was a God-send because on it they depended not only for food, but for many of the necessities of life. When one was seen the united forces of these villages was generally required to effect its capture. After the excitement of the chase was over it was impossible to decide which of the tribes had the best right to it, and to take it home with them. At this part of the proceedings they did not stop to wrangle over the ownership of the fish. By an ancient law of these people they had to settle it in a very different manner, which was as follows. These peoples canoes were large enough to seat from 25 to 30 people, and each canoe was provided with long cedar bark ropes which they took and tied on the fish, so many to the head, and so many to the tail. When all were ready, at a given signal, every man pulled with might and main, the representatives of each tribe by themselves pulling in a different direction to the others. The rule being thus, the tribe who pulled the whale farthest were the victors, and to them belonged the "spoil." Of course they had to pull the other contestants as well. The pulling, the shouting and the endurance displayed during the contest were simply remarkable. The winning party took the spoil home to their village, where it was cut up and divided amongst the members of the tribe. The losing party

good-naturedly started for their homes, well knowing it might be their lot to be victorious in the next pull they had.

Were it possible to obtain an account of these contests, no doubt a readable book might be written on the subject. That they had these pulling contests is perfectly true. I write no fiction. For a number of years these people were gradually decreasing in numbers through troubles with tribes on other parts of the islands and other things. In 1875 the remnant of them took their belongings and moved to a new village. They had built upon an island on the east coast and on a tract of land which they had bought from their neighbors, the Skidegats. Now nothing is seen at their villages but a few half rotten columns and a large number of tombs.

JAMES DEANS.

---

### A MOUND-BUILDER'S CAVE.

*Editor Am. Antiquarian:*

Two miles north of Vanlue Postoffice, in Hancock county, Ohio, is a hill elliptic in outline and which embraces an area of some 600 acres, and of a limestone foundation, the rock comes quite to the surface in places, the soil, especially on the west, is thin and the timber small. As early as fifty years ago small pocket-like caves were discovered by horses breaking an opening through the thin crust. From time to time other caves were discovered in similar manner.

One thing is peculiar about these caves, the entrance is found where there is not the least indication of a cave to be seen, the surface for the most part being level ground.

One of these caves proves to be of considerable extent. At a depth of about 70 feet a large body of pure water is found, which must be the reservoir, and the several large springs to the west are the outlet. Mr. Samuel Straub, who lived many years near by, being annoyed by foxes which preyed on his poultry, undertook to dig them out. This was in 1875. On removing about one foot of soil and debris he came upon a large flat rock. This disclosed to view one of the most valuable finds for the archæologist that has ever been discovered. About eight feet directly below the entrance was found exposed to full view seven human skeletons, one of them enclosed in a rude stone coffin. A pendant of green-colored slate with etchings on both sides was found on the latter skeleton. Three other pendants made of slate differing in color and size, including one with etchings, were found with the other skeletons, also a pipe made of pottery—very hard and smoothly polished; also fragments of pottery and various horn and bone implements. The people who witnessed this discovery inform me that the bones were in disorder and much decayed, traces of fire being particularly noticeable. No skulls



were preserved. The relics procured at the time by Mr. Straub were turned over to Dr. Eilig. Carey, Wyandotte county, Ohio, where they have remained until last week. The cave has been partly filled up with debris from a stone quarry opened near the entrance. With no little difficulty I worked my way down to the original flare of the cave. I was rewarded in finding numerous bones of small animals, fox and skunk bones being the most numerous, also a few fragments of human bones. The latter were much more decayed than the former. The bones did not appear to be charred by fire, though much evidence of fire was visible. Back in the farthest corner, twenty feet from the entrance, was found considerable mould of a brownish color, quite unlike the soil on the outside. There being so much debris in the way it was impossible to make a thorough investigation without going to considerable expense, I concluded not to do any more work until parties are found who are willing to assist in making a thorough investigation. It is my opinion that there are other cave burials in the neighborhood. At several places in the ploughed fields the farmers say the grounds sound shallow underneath the horse's feet. Several sunken depressions in ploughed fields were pointed out to me which have given away in recent years. The situation of these depressions are quite like the cave No. 5. I trust that competent parties will hasten to this locality and make an investigation. The groups of mounds are three in number, four feet in height and average about twenty-five feet in diameter and of circular outline, composed largely of stone, differing in no respect from the debris at hand. All three mounds have been opened by farmers and found to contain human bones. In one evidence of fire was seen. The bones I discovered in No. 8 appear to be in a better state of preservation than those found in the cave. Owing to the inclemency of the weather no further exploration was made further than removing a few feet of surface. It is possible that the original foundation of this mound has not been disturbed and investigation will soon be made.

J. R. NISSLEY.

### THE FRENCH TWO-BARRED CROSS.

*Editor Am. Antiquarian:*

It is only a few years since I first met with the double-barred cross among relics of our early French. That sort of cross is said in Mensel's *Christian Symbolism* (I., p. 513,) to belong to an archbishop or the Greek patriarch. But the Archbishop of Milwaukee does not wear such a cross and is scarcely acquainted with it.

The first American one I remember was in possession of Col. Hitt, of Ottawa, Ill., a specimen found at Starved Rock, so

famous in the history of LaSalle and Tonti. This was of bronze. The second cross with two transverse pieces I saw in the hands of Dr. E. D. Neill, in St. Paul. This article was of silver and had been picked up at the portage between the Fox and Wisconsin rivers.

The third double-armed cross known to me came from Port Andrew, where it was discovered about thirty-three years ago. The exact spot of its discovery was Richland County, Sec. 35, T. 9, R. 2 west. This curiosity was of silver,  $2\frac{5}{8} \times 1\frac{1}{2}$  inches, and weighed  $5\frac{1}{2}$  pennyweights. The ends of the arms were curved inward, and the ends of the upright were convex. A fourth patriarchal has just been described to me. This find was made on Detroit Island, which lies off the entrance of Green Bay. This relic is of the same type with the one last mentioned, but more ornamental—has something of floral carving, and a ring at the top for hanging around one's neck. It is silver and much larger than the third specimen, measuring  $5\frac{1}{2} \times 2\frac{3}{4}$  inches. It came to light from some fishermen digging a hole for burying offal. Finding skeletons, they pushed research till they had laid bare not only the crosses, but knives, a gun-spring, fish-spears, a brass kettle, pot-hook and tomahawk.

These remains point to the fugitives from the Jesuit mission east of Lake Huron, which was broken up by the Iroquois in 1649. Some of the Indian converts took refuge in the islands of Lake Michigan. Shepherds follow sheep, and so missionaries were not long in reaching those isles of the far west.

In the middle of the upper arms of the last cross I find the letters R. C. What they mean I can not conjecture. Are they the initials of the owner? or of some sacred words.

Believing the patriarchal form of the cross to be a rarity, I give these details concerning the four which have come under my observation, in the hope that others may add to the trifles I have gleaned.

PROF. JAMES D. BUTLER.

Madison, Wis., Dec. 27, 1887.

---

## A STONE CHARM IN THE MOUTH OF A MOUND-BUILDER.

*Editor Am. Antiquarian :*

On opening a mound at Albany, Ill., last summer there was disinterred a skeleton which contained in its mouth a stone peculiarly worked. It would seem that the stone was placed in the mouth before the mound was reared. I wish to inquire whether anything of the kind has been found in other cases? If so it would seem that a religious custom similar to that referred to in your editorial of November, 1887, as having been practiced

in Mexico, was also practiced by the Mound-builders. The use of jade as a charm and the habit of putting pieces of it on the tongue at the time of burial is not known to have prevailed among the Mound-builders. I present the subject as an inquiry.

Yours truly,

E. P. VINING.

Chicago, Dec. 7, 1887.

—o—

## Editorial.

*Per t. Y. D.*

### PALEOLITHICS AND MOUND-BUILDERS, THEIR AGE AND DATE.

In our last number we gave a sketch of the geology, geography and ethnology of the lake region. Two different lines of terminal moraines traverse the region south of the great lakes, leaving their impress upon the topography, but having the effect both to separate and unite the lakes and the rivers. The point to which we now call attention is that this barrier has been from time immemorial a sort of dividing line between the races. We stated that the paleolithic relics had been found near this line of glacial gravels, but at either end, at Trenton, N. J., and River Falls, Minn. We would call attention now to the discovery of paleolithic relics in Ohio, one at Madisonville and the other at Loveland, twenty miles northeast of Cincinnati. The first find was announced by Prof. Putnam about a year ago. We are indebted to Prof. F. G. Wright, of Oberlin, for the information as to the last find. An article furnished by him to the *Independent* was published Dec. 22, 1887.

The find at Madisonville was made while digging a cistern. It consisted of two paleolithic spear heads of black flint, each about three inches long. They were found in undisturbed gravel eight feet below the surface by Dr. C. L. Metz. Dr. Metz found last May another rough stone implement in gravel thirty feet below the surface, near where mammoth bones had been found by workmen not long before. It was an oval-shaped, flat stone about six inches long, which had been chipped to an edge all around. Prof. Wright has recently visited these localities. He says that there are, both at Madisonville and at Loveland, extensive gravel deposits belonging to what used to be called the terrace epoch, and which are now universally recognized as the work of the torrent floods which poured down all the southern flowing streams during the breaking up of the great ice age. The ter-

racés at Cincinnati are one hundred and thirty feet above low water mark; at Madisonville about two hundred feet high, one hundred and sixty feet above the Little Miami. At Loveland they are about the same level, but the stream of the Miami is only fifty feet below. Prof. Wright goes on to say "the archaeological importance of these discoveries can scarcely be over-estimated." "They establish at once a chronology for the human race here which must be reckoned by as many thousand years as we have allowed centuries for the mound builders."

We call attention to the discovery because of the fact that it discloses the existence of different races, which were in about the same condition all along the line of this terminal Moraine. The earliest race may be called the paleolithic, as the relics which have been discovered in the gravel are said to be very rude. Professor Wright does not describe them so that we can say in what particulars those in Ohio resemble those in New Jersey and Minnesota, except that he says they are paleolithic. The relics in New Jersey are made from a hard trap rock which has a conchoidal fracture and a gritty surface. There is a ledge of this rock cropping out about thirty miles from Trenton. The relics found in Minnesota are of quartz, similar to the quartz rocks which crop out in the vicinity of River Falls. The specimens in Ohio are said to be of black flint, whether the flint resembles that found at Flint Ridge or Ohio Falls we are not informed. It would seem from these finds as if a race formerly dwelt upon the edge of the ice sheet, very much as the Eskimos dwell among the icebergs of the arctic regions and the Greenlanders dwell on the edge of the glacier which occupies the interior of that Island. As to the race qualities of this people there is at the present and must be much uncertainty. Some have maintained that they were the Eskimos, and yet others say that it was a race totally unlike any known people. Boyd Dawkins says of the paleolithic race in Europe: "We can not refer them to any branch of the human race now alive. We are without a clue to the ethnology of the river drift man who most probably is as completely extinct as the woolly rhinoceros or the cave bear. The identity of implements of the river drift hunter proves that he was in the rude state in the old and the new world when the hand of the geological clock struck the same hour. It is not a little strange that this mode of life should have been the same in the forest of the north and south of the Mediterranean, in Palestine, in the tropical forests of India and on the western shores of the Atlantic. It must be inferred from his widespread range that he must have inhabited the earth before the glacial epoch in Europe and America."

The relics at Trenton have been declared by Dr. Abbott to be similar in all respects, except in material, to those found in the valley of the Somme. Prof. Haynes in 1878 discovered in Upper

Egypt scrapers and hatchets pronounced by archæologists to be also exactly similar to those of the river Somme. Now the question is, whether this race which left its relics on the edge of the ice sheet in the United States of America lived at the same time as the people who lived so long ago in Europe, in Egypt, in Palestine, and in India. Is there not a call for more definite information as to the time in which these various deposits were made. If "paleolithic man" lived in all parts of the world at the same time, then we must throw aside all the claims as to the extreme antiquity of man in Europe, or else assign a greater antiquity to the glacial drift found in America than geologists at present are inclined to give to it. It is easy to conjecture an untold number of years for relics to have lain in the Nile mud or in the Trenton gravel, but what do the geologists say about these deposits? The race which inhabited the edge of the ice sheet in New Jersey, Ohio and Minnesota does not seem to us so very ancient, and when archæologists claim hundreds of thousands of years for the paleolithic man in Europe, we ask for a reconsideration of the facts.

Prof. Wright says: "The authorities of the American Association for the Advancement of Science, a year ago at Buffalo decided that the Niagara gorge, which is an undoubted measure of the close of the glacial period, could not be 10,000 years old," yet he says that "the age of paleolithic man is to be measured by thousands, while that of the Mound-builders is by hundreds."

The age of the Mound-builders, that is of these southern Mound-builders of Ohio, cannot be determined. It would seem from certain evidences that there were several periods of occupation among them; which was first is uncertain. The massive works at Newark, at Circleville, at Marietta, at Cincinnati, Fort Ancient, and in Hamilton county may have been the earliest. They were certainly the most elaborate and show the longest residence. There are among them certain circular enclosures which were probably built by the later Indians, and of quite modern date.

The extent of the earthworks in southern Ohio would indicate that the people are much more advanced; they were also more permanent and reached a more perfect tribal organization. There are some evidences that confederacies existed among them. As to the age or epoch in which these different races inhabited the soil we can only say this. The Mound-builder age was probably less than 10,000 tokens and may have been less than 1,000 years ago.

In Europe there are several classes of works which intervene between the paleolithic age and that of the tumuli or Barrows, namely, those of the cave dwellers and of the shell heaps. In this country we have not found the intervening data. The age of the Mound-builders would naturally be classed with that of

the dolmens, the cromlechs, or possibly with the earlier Lake dwellers. The question is as to the races which intervene between the paleolithic and the Mound-builders period. A great gap exists between them. Can we in any way fill up this gap? At present it would seem to be difficult. The Mound-builders were much more advanced than the Indians, and there is evidently a reverse of the progress which is supposed to have existed in Europe, the earlier being the more advanced. There are, to be sure, caves in this region, but the caves seem to have been occupied by a people who resemble the Mound-builders or by a race resembling the modern Indians.

The question is have we any such evidence of the extreme antiquity of the cave dwellers as Europe presents. There are caves in America, but so far they have yielded only neolithic relics and in no case have extinct animals been found associated with the remains of man. The region along the great lakes contains caves, many of which have been explored and their contents described. Mr. J. R. Nissley has described a cave in Hardin county, O., in which were discovered a number of interesting relics. They are evidently, however, of a neolithic type, and may have belonged to Mound-builders. One of the tablets has a very singular looking figure inscribed upon it. It consists of a body that resembles that of a fish with broad caudal fins, with sharp tail and a head with a human face with a sharp-pointed chin. It is a singular and odd looking figure, and yet there is nothing about the perforated tablet to indicate that it was very ancient. The shelter caves found at Elyria, O., and explored by Mr. C. E. Baldwin some years ago yielded relics which were more primitive than this. They consisted of bone awls and bone needles, skulls, and skeletons, but they may have been deposited by a people even later than the Mound builders. It is rather remarkable that no cave has ever been found in this region in which either the bones of extinct animals or implements of a primitive character, like those taken from the caves in England. The caves in Tennessee have yielded a few mummified bodies, but the fact that some of these were enveloped in feather dresses would show that they were recent. We have nothing of a satisfactory character to fill up the gap between the paleolithic age and the Mound-builders.

We come to the age of the Mound-builders. It is evident that there were two classes of Mound-builders, one south of the terminal moraine and the other north. On this point we have the testimony of Prof. F. W. Putnam, who advanced the opinion recently in a lecture before the Northern Ohio Historical Society in Cleveland. Prof. Wright quotes Prof. Putnam as saying that his examination of ancient skulls from Ohio shows beyond question that the Mound-builders were allied to the tribes of Mexico and South America. These are the short-headed races. Out of 1,400 skulls from burial places near Madisonville more than 1,200

were of that type. This is new, and we are not quite sure whether Prof. Putnam meant to be understood in that way. In the reports of the Peabody museum, of which Prof. Putnam is the curator, Dr. Lucien Carr has maintained that the short skulls found in the stone graves of Illinois and Tennessee resemble those of the Shawnee Indians, and Prof. Putnam has said that those in the stone graves of Tennessee show that a variety of tribes were buried together. Mr. Henry Gilman discovered skulls in the mounds of Michigan which he claims were older and of a lower order than ordinary Mound-builders. Dr. Bela Hubbard does not agree with him in this position. The perforated skulls and flattened tibiae found by Mr. Gilman in the mound on the River Rouge were quite likely those of modern Indians or of the northern race of Mound-builders, who were evidently hunters. The position which we take is that the southern mound builders were older than the northern, and that these round skulls belonged to the earlier race. The terminal moraine cut across the northern part of the Mound-builders' habitat and divided one class of mounds from another. Col. C. Whittlesey maintained that the works north of the water shed were those of a military people, while those south belonged to a sedentary race. Their works show that they were more permanent, had a more perfect organization, were more advanced in culture and had a higher type of religion. Tradition shows that the race of Algonquins, which overrun the northern part of this territory, were more recent and changeable. Here is a case where the more primitive people are the more modern. It is possible that even in the northern part of the Mound-builders' habitat there was a succession of races.

The study of the relics gathered from the region around the great lakes would certainly give rise to this idea, and yet perhaps the subject needs to be studied more attentively.

There seems to have been a great gap between the paleolithic man of the gravel beds and the Mound-builders of this region, but it is yet uncertain as to what date the Mound-builders lived.

There seems also to be a great gap between the Mound-builders of the Ohio valley and those near the great lakes, and the question is about the connecting links and the overlapping dates.

## LITERARY NOTES.

THE MEXICAN BACCHUS.—Three figures are described by Charnay in his book on "Ancient Cities," which he calls "statues of Tlaloc," but which others call the "Mexican Bacchus." They represent a person lying upon his back, with head raised and knees drawn up, holding a vase upon the stomach. One of these figures was found at Chichen Itza, and the other at Tlascala. Both have turbans on their heads, sandals on their feet, three bands around the wrists and ankles, and bands also like garters above the calves of the leg. They are otherwise naked. Sanches has described one on which "the sculptor had carved on the surface of the stone a sheet of water, aquatic plants, two frogs and a fish, while the bank was occupied by beans and grains of maize, which are the attributes of Tlaloc." The attitude and the eye and the head dress and other parts of the costume of these statues differ from all other figures of Tlaloc; and it still remains a question whether there was not a Mexican divinity which answers to the Asiatic Dionysus, or the Greek Bacchus. "Dr. J. Sanchez, professor of archæology in the National Museum of Mexico, has published in the *Anales del Museo Nacional*, a long dissertation—full of erudition—to prove that the statue discovered by Le Plongeon at Chichen Itza, was a representation of the *God of the natural production of the earth*, and that the name given by me was altogether arbitrary; also an article has appeared in the *North American Review* for October, 1880, signed by Mr. Charnay, in which the author, after reproducing Mr. Sanchez's writing, pronounces his opinion, that the statue is the effigy of the *god of wine*—the Mexican Bacchus."

THE TOLTECS.\*—Dr. S. G. Morton, in his inquiry into the characteristics of the aboriginal race of America, designates the semi-civilized nations by the collective name of the Toltecan family. He says "there is reasonable ground for the conjecture that the Mexican Peruvians were branches of the Toltecan stock." He, however, contrasts the Aztec rulers of Mexico with the gentler Toltecs who preceded them, and whose arts and ingenuity they usurped. Dr. D. G. Brinton now claims that there were no such people as the Toltecs, that their existence is a myth and the name is an invention. He maintains that Tula, with its snake hill, was an early station of the Aztecs, occupied in the 11th and 12th centuries by their clans, and the story that it was the home of the civiliziers of Mexico and Central America, and the birth-places of the gods, is a monstrous myth. Dr. Brinton is not sustained by all in this opinion, though there are writers who agree with him. M. Desire Charnay, in his new book, devotes many pages to the Toltecs, and does not seem to doubt the existence of the Toltec race, but Mr. H. H. Bancroft merely recognizes the name as significant of a cult, but denies the nationality of the people. This is an interesting question and one to which

---

\*WERE THE TOLTECS AN HISTORIC NATIONALITY?—By Daniel G. Brinton, M. D. read before the American Philosophical Society, Sept. 2, 1887.



we invite attention. M. Renouf, in his lectures on the religions of Mexico and Peru, says there never was a Toltec empire, but simply a confederation of the three cities of Tullan, Colhuacan, and Otompore, but the term may be used to designate the most brilliant foci of the civilization imported from Central America and a designation of everything graceful, elegant, artistically refined, and beautiful. In this sense we have no doubt the term will be used in the future as in the past.

CHARNAY'S NEW BOOK.—There are a few points on which archaeologists may disagree with the author. One is his opinion about the Toltecs being a separate nation; another point is as to the use of wagons in prehistoric times; and still another is the moderately recent origin of these cities and places. But if they differ on these points they will at least come to the author's position as to the beauty and barbaric magnificence of the sculpture. Charnay is not inclined to reduce the civilization of Mexico and Central America to the level of the savage races and does not undertake to interpret the palaces and temples by the communistic system. He holds to the opinion that there were great differences between the upper and the lower classes and ascribes much of the magnificence which prevails to the despotic nature of the monarchs and of the priests. In this respect there is a resemblance between the cities of Egypt, Assyria and Chaldea and the ancient cities of America, but a strong contrast between the works of the civilized races which dwelt in Central America, and those of the savage and uncivilized races found further north.

8 PORTRAITS IN STONE.—Landa tells us that it was the custom when a person of eminence died to make images of stone, terra cotta or wood. The descendants of the deceased placed the ashes in a hollow on the back of the head made for that purpose. Le Plongeon says that he found the tomb of a great warrior which contained a small heap of grayish dust, over which lay the cover of a terra cotta pot, also painted yellow; a few small ornaments of macre, that crumbled to dust on being touched, and a large ball of jade with a hole pierced in the middle. Near, and lower than the urn, was discovered the head of the colossal statue, "to-day the best, or one of the best pieces in the National Museum in Mexico." Close to the chest of the statue was another stone urn much larger than the first. On being uncovered it was found to contain a large quantity of reddish substance and some jade ornaments. From the position of the urn he made up his mind that its contents were the heart and viscera of the personage represented by the statue; while the dust found in the first urn must have been the residue of his brains. This finding of the heart and brains of that chieftain, afforded an explanation, if any was needed, of one of the scenes more artistically portrayed in the usual paintings of his funeral chamber. In this scene, which is painted immediately over the entrance of the chamber, where is also a life-size representation of his corpse prepared for cremation, the dead warrior is pictured stretched on the ground, his back resting on a large stone placed for the purpose of raising the body and keeping open the cut made across it, under the ribs, for the extraction of the heart and other parts it was customary to preserve. These are seen in the hands of his children. At the feet of the statue were found a number of beautiful arrow-heads of flint and chalcedony; also beads that formed part of his necklace. Le Plongeon maintains that the statue was a portrait of the deceased warrior.

**COLOSSAL HEADS.**—Stephens has described a colossal head which he saw at the base of a pyramid at Izamal which was 7 feet 8 inches high. Charnay in his "Ancient Cities" describes this figure and says that the features at first were rudely formed by small rough stones held together by means of mortar, and afterwards perfected and filled with stucco. The figure has enormous mustaches. Another colossal head, 13 feet high, is described by Charnay as at the base of another pyramid at Izamal. The eyes, nose and underlip were formed by rough stones coated with mortar. Ear ornaments and double spirals on either side of the face, symbols of wind or speech, may be seen similar to those in Mexico at Palenque and Chichen Itsa. This last colossal head reminds us, in the expression of the face and the shape of the nose and eyes, of the head of the sphinx in Europe, and yet it is not a sphinx. Possibly, however, it may have been a similar conception of a nature power, as embodied in the human form and face, and yet its association with the pyramid is very significant. Was there a remembrance of the sphinx and the pyramid; or do the sphinxes and the pyramids in the two countries prove a parallel development of thought? The coincidence is certainly very striking.

**DEATH'S HEADS AND SMILING FACES.**—One of the most common symbols that we find in Central America is the death's head. It is seen sculptured upon the side of the altars; also at the top of the idol pillars. It is also seen painted on pottery vases and many other ornamented articles. It assumes a great variety of shapes and sometimes is so complicated as to be with difficulty recognized. Stephens speaks of rows of death's heads of gigantic proportions, as seen half way up the sides of the pyramid at Copan. He has also pictured an altar 7 feet square and 4 feet high with a death's head sculptured on the side of it at the same place. In this figure we see two bulging eyes, two large front teeth and the nostrils and recognize the general shape of the skull. There is a resemblance between the eye of this skull and that of the god Tlaloc, and the question is, whether the skull was not intended to symbolize this personification of a nature power, as Tlaloc was the god of the weather. In contrast to this are the heads and faces which Stephens describes as having such a remarkably serene expression. One is at a loss to understand why there should be such a contrast, but it shows that there was a design. Everything in the sculpture of this ancient people was significant. The death's head was made at least as terrific as possible; and the other head and face, as placid as stone could make it, and the impression on the worshippers must have been marked.

**COMPOSITE PHOTOGRAPHY** as applied to Craniology, by J. S. Billings, and on measuring the cubic capacity of skulls, by Washington Matthews. A new craniophore for use in making composite photographs of skulls, by J. S. Billings and Washington Matthews. Thirteenth and fourteenth memoirs of the National Academy of Sciences, published by the war department. Composite photography accomplishes the same results as the trained glance of the Craniologist and in the same way. One skull after another is brought before the camera as before an eye, until the type is ascertained. In this case six skulls of Sandwich Islanders and six of Arapahoe Indians were photographed. If this process could be carried on, and the composite

type of all the races be secured, we might have a test which would be satisfactory. Additional to this the ascertaining of the cubic capacity of a skull by filling it with water may furnish a test. It is one of the most difficult problems to know how to distinguish between races, especially when they are dead, and no distinctions such as are common in life can be fixed upon. Drs. Billings and Matthews are following up the subject, and we hope for good results.

**SERPENT AND SIVA WORSHIP.**—Mr. Ferguson suggests that serpent worship arose among a people of Turanian origin. Mr. Staniland Wake holds that it originated in Central Asia, and traces it back to the Accadians, the ancient Medians of the Turanian stock. The connecting link between the serpent worship in Accadia and in America would be the Northern race. "One of the solar heroes of the Volsing tale is Atli, who becomes the second husband of Gudron, the widow of Sigurd; Sigurd himself being the slayer of the dragon Fafnir, who symbolizes the darkness or cold of a northern winter—the Vritra of Hindu mythology." Mr. Hyde Clark, on the other hand, assumes a racial affinity between the Dravidians of India and the Australians, and appears to demonstrate linguistic relations between the races of Asia and America, and even connects the Turanians of China and Japan with the Americans. He says the legend of Siva and Kali is prehistoric and has survived in Hindoo mythology. Siva is not mentioned in the Rigveda. He was no part of the religious system of the Aryan invaders of India, but was a great divinity of the older population. His temples are the oldest in the Deccan and he is the god of the sanctuary of Elora. Mr. Staniland Wake says the chief characteristics of the serpent throughout the east in all ages seems to have been his power over wind and rain. Among the Chinese the dragon is regarded as the giver of rain. The Chinese notion of the serpent or dragon dwelling above the clouds in spring to give rain reminds us of the Aryan myth of Vritra, the throttling snake or dragon with three heads, who kept away the rain clouds, but who was slain by Indra, the beneficent giver of rain. In Greece Hercules was said to have been the progenitor of the whole race of serpent-worshiping Scythians through his intercourse with the serpent Echidna. In the Mahabharata, Rudra, like Hercules, was the destroyer of the serpent. The serpent symbol was elevated in the wilderness for the healing of the people, and curiously enough Siva was called the healer. One of the four national idols of Madagascar is the serpent god of healing. Esculapius and Harpocrates were serpent gods in Greece. The personification of wisdom is one office of the serpent.

**CHAMBERS IN MOUNDS.**—Prof. F. W. Putnam discovered chambers in a mound in Liberty township, Ross County, Ohio. These chambers were made by placing logs on the clay in such a way as to make inclosures from six to seven feet in length, from two to three feet in width and about one foot in height. The body was wrapped in garments and placed full length in some cases, but in other cases the bodies were burned; the chambers being covered by mounds of clay before the body was consumed. With the bodies were placed copper plates, ear ornaments, beads of shell and copper, copper celts and long flint points. Prof. Putnam thinks that the cremation and the horizontal burials were at different times. This is a point which needs to be cleared up. Did the same tribe practice cremation and horizontal burial? If they did not the question is, how did the different tribes

come to build the same kind of chambers or tombs? *Proceedings of the Society of Natural History, Boston, Vol. XXII.*

THE FIGURES SEEN BY MARQUETTE.—Mr. McAdams has in his book a picture of the figure which purported to be a copy of the figure seen by Marquette during his voyage down the Mississippi river. This figure has

a human face attached to a nondescript body which resembles that of an animal with wings and tail and four legs, but covered with feathers. The face has a beard, but two huge ears protrude like horns above the head, and it has a beard below the chin. This is



a pen and ink sketch made by Wm. Dennis, April 3, 1825. It is evidently an imaginary sketch, for no Indian or Mound-builder would inscribe a face resembling a Yankee with a beard, and only a white man would think of making feet or face in the shape that this figure has them.

THE SPHINX AMONG THE MONUMENTS IN CENTRAL AMERICA.—Le Plongeon discovered a figure of a warrior, called by him Chaacmol, spotted tiger, found in the gymnasium at Chichen Itza, which bore a shield painted with round green spots resembling the ornaments over the tiger-headed throne on the entablature of the same monument. He also found the images of spotted tigers in a mound near by and near the mound a half buried statue in the mound representing a wounded tiger reclining on his right side. A few feet further on he found a human head with the eyes half closed. When placed on the neck of the tiger it fitted exactly. He says so arranged it recalled vividly the Chaldean and Egyptian deities having heads of human beings and bodies of animals. This discovery by Dr. Le Plongeon is remarkable, for it is the only case where a figure resembling the sphinx has been discovered. There are, to be sure, a few inscribed figures in which animals with human faces may be recognized. Mr. Wm. McAdams speaks of one as formerly existing on the rocks on the Illinois river, a very rude pictograph. In front and across the face was the naked figure of a man having a bow in his hand. This last figure of a human form was later than the figure of the animal with the human head. Schoolcraft speaks of a chief of the Winnebagos, called Little Hill, who drew the pic-

ture of an animal which might be called a medicine animal. This animal, he said, was seldom seen and then only by medicine men. The same author gives other illustrations of these Indian manitous with serrated backs representing the scaly bodies of so-called dragons. There are certain inscribed figures on the rocks in Arizona which reminds us of the sphinx, and yet it is somewhat doubtful whether they were intended for that purpose. They contain the outlines of a crouching animal placed upon a pedestal and the whole block raised upon a cart with wheels. These figures may have been inscribed by the Zunis since the advent of the white man, as the Zunis have wheeled carts at the present time.

**WHEELED CARRIAGES.**—Charnay maintains that wheeled carriages were known to the Aztecs and Toltecs before the discovery of America, and refers to some toys with wheels which he discovered in the cemetery at Tenenpanco. It is worthy of notice that these toys have the figure of the fox as the body of the wagon. The head and tail of the fox extending beyond the wheels. Some have called the wheels of these toys "whorls". Wheeled carts are also seen pictured on the rocks in Arizona. Still it is a question whether wheel carriages were used in prehistoric times. The modern Zunis use wheel carts, but it is unknown whether they borrowed them from the Spaniards.

**A CHINESE SYMBOL AT COPAN.**—Dr. E. T. Hamy has an interpretation for certain figures on a sculptured stone at Copan, which is somewhat novel. The stone itself resembles an altar, with the top rounded up somewhat in the shape of a loaf of bread in a round bake-pan; the rim of the bake-pan being cut or divided into segments, and the loaf itself being marked by two lines or grooves resembling a double letter S, with a hole in the center at the place where the two letters meet. This simple figure, Dr. Hamy thinks, is the Chinese symbol called the Tai-lsi, the great extreme, the pole of the world, the axis on which every prosperity revolves. The Tai-lsi is found on magical tablets used in propitiatory sacrifices to obtain rain, painted on the banners of temples, on the red paper strips which were hung about the door at New Years, engraved on arm-chairs, household implements and pipes. The famous symbol decorates the upper part of an altar in the sacred precinct of the old religious city Copan, and the altar was placed in front of a statue. Miss A. W. Buckland and M. Bertin dissent from this interpretation.



**THE NATIVES OF HISPANIOLA.**—The natives of Hispaniola were visited by Christopher Columbus and described by Ferd Columbus, his son. An article on the customs, habits, superstition, relics, religion and character of this people, by H. L. Roth, is contained in the journal of the Anthropological Institute, of February, 1887. Any one who reads this article will be convinced that there is a great resemblance between the aborigines of Hispaniola and the North American Indians. Stone implements, pottery, woven cotton garments, canoes, the feather headdresses and necklaces made of sea shells are found among them. These, with the practice of marching single file in trails, and rudely cultivating the soil with wooden spades, as well as the communistic system, and the government by Caciques, all remind us of North American Indians. They were, to be sure, acquainted with the precious

metals, used and traded in gold ornaments. They also wove and spun cotton. They had also songs and ballads, and played on wind instruments resembling large flutes. They wore masks made of beaten gold, and sometimes wore clothing made from the bark of palm trees. They had domestic animals such as dogs and fowls. They buried their Caciques tightly enveloped in cotton bands, and immolated his wives with him. All this shows that the American race reached as far as the West India Islands. This people were idolaters. They worshiped divinities called Cenis, but they give them names, every one regarding one as a patron on one subject and another on another subject. Some represent rain and wind. Others make the grain to grow. Idols were found by the Spaniards, made with four feet like a dog, and others with a tail and horns like Satan, Travelers speak of large stone circles measuring 2,270 feet in circumference resembling a paved road 21 feet in breadth, the object of which is unknown. These remind us of the circles found among the mounds and earthworks of the continent.

*Y. Kab* THE HOUSE OF THE ECHO.—Mr. Edwin A. Barber read some time ago, before the Numismatic and Antiquarian Society, Philadelphia, a paper entitled "A Description of a Prehistoric Cave Ruin in Southern Utah." This ruin, one of many visited by him while accompanying a branch of the United States Geological and Geographical Survey of the Territories, was selected for description as being one of the most characteristic of these remains. It is situated in the southeastern corner of Utah, near the southern bank of the San Juan river. A mesa or table land several hundred feet in height is separated from the bank by a level plain an eighth of a mile wide. Followed out on the perpendicular face of the solid rock is a singular hemispherical cave 200 feet in diameter. Built around the arc of the semi-circumference of the cave and midway up the narrow ledge of rock is a long line of masonry which has been colored a dingy red, in imitation of the surrounding formation. On arriving at the base of the opening the explorers were astonished to discover that the cavern possessed some remarkable acoustic properties, every word spoken or whispered at the entrance was thrown back to the speaker. On account of this peculiarity they named the ruin *La Casa del Eco*, the house of the echo. The walls of the structure are composed of small flat stones, evenly faced and neatly laid in an adobe mortar. The interior is divided into a series of thirteen rooms, connecting with each other by doorways in the partition walls, which measure from a foot to eighteen inches in thickness. There were no true doorways cut in the outer wall, but in several rooms rectangular openings, varying from one to two feet in height, served to admit light and possibly ingress and egress. The main entrance to the series of rooms was through the single doorway. Careful measurements hitherto unpublished of this remarkable cavern were presented by Mr. Barber in the course of his paper.

*Y* FOUR RACES IN YUCATAN.—Augustus Le Plongeon, M. D., in his vestiges of the Mayas, speaks of four races, distinguished by their features, their stature, etc., in Yucatan in pre-historic times. First, a dwarfish race, still extant; second, a race of giants, whose portraits are painted on the walls; third, the flat-nosed, almond-eyed, Siamese race of Copan; fourth, the long, big-nosed, flat-headed race of Palenque, said to have invaded the country in the beginning of the Christian era. The west was the region whence they came, according to Landa. The coming of the bearded men from the east

is to be distinguished from this advent of the flat-headed race of the west. Le Plongeon is not the only one who has noticed these points, yet there are many suggestions contained in his writings which are worthy of notice.

**TATTOOING.**—A pamphlet on "Tattooing Among Civilized People," by Robert Fletcher, M. D.; contains an allusion to the practice of the art in pre-historic times. The origin of the custom is unknown. It would seem as if the totem system was at the basis of it. Some have asserted that tattooing was adopted to conceal the nakedness of the body; but this seems to be doubtful. Among civilized races the symbols of trade, religious emblems, the signs of friendship, imitative shapes and mere ornament and idle pastimes would embrace the majority of cases of tattooing. Among the uncivilized tribes the tribal signs and the individual totems were generally tattooed.

**THE SERPENT SYMBOL IN SWEDEN.**—Dr. S. Kneeland, in 1885, showed the Boston Society of Natural History two gravestones from Central Sweden with runic inscriptions of the heathen period. These were cut in the body of a serpent or a dragon. Dr. Kneeland described at the same time a family of Laps, which lived in Copenhagen in a conical tent about nine feet in diameter with an opening in the top for the escape of smoke and the fire on the hearth of the stones in the center. Both of these reports remind us of the customs prevalent among the North American Indians with the exception of the runic inscriptions.

**VIKING STATUE IN BOSTON.**—The statue of Leif Erikson, supposed discoverer of the American continent, A. D. 1000, was unveiled upon the extension of Commonwealth avenue at the entrance of the new Back Bay Park, Boston, Saturday, October 29, 1887. Ole Bull, the wonderful violinist, conceived and suggested the idea of the statue about ten years ago. The principal address was made by Prof. E. N. Horsford.

**MILLIONAIRE INDIANS.**—The Osage Indians in the Indian Territory have about \$7,000,000 bearing 5 per cent interest. They are paid \$250,000 a year in cash. The entire tribe numbers only 1,600. Each person receives about \$160 per year. They are the richest people in the Indian Territory. They do nothing but lie around and eat. They are satisfied with themselves and their condition. They have the vices of aristocracy without the cultivation.

**LECTURES ON PALESTINE.**—Rev. Dr. Selah Merrill, our associate editor, is lecturing this winter upon the Holy Land. He has visited Palestine four times. He has resided there three years as consul at Jerusalem. His books are "East of the Jordan," "Galilee in the Time of Christ," and "The Site of Calvary." Among his discoveries is that of the famous second wall at Jerusalem.

A FOSSIL SKELETON was discovered six feet under ground by workmen in a stone quarry near Culbertson, Neb. The spinal column was curiously incased in rock, and thoroughly petrified.

**AFRICAN SYMBOLIC MESSAGES.**—A very interesting communication to the Anthropological Institute, G. B., from Mr. J. O. Payne of Lagos, is in reference to African symbolic messages. They consist of strings of cowries, interspersed with feathers, reeds, spices, etc. One string consists of six cowries

all turned in the same direction. The quill of a feather passes through the cowries, but the feather itself is bent back over the cowries. Africans are in the habit of cleansing their ears with a feather. Six in the African language means, to draw. The message was: "By these six cowries I draw you to myself. By this feather I reach your ears. I am expecting you to come to me." Another string: the cowries are placed two and two, face to face, to indicate kindly feeling. Six of them indicates, to draw. A long string is attached to indicate distance. The message was: "Though the distance between us may be long, yet I set my face toward you and draw you to myself."

**POLYNESIANS.**—Rev. George Brown has in the same journal a paper on the Papuans and Polynesians. He says the Papuans, among whom he labored as a missionary, had the same language as the Polynesians, among whom he had previously lived, and he believes that they were the same race. On the other hand Judge Fornander, of Hawaii, maintains that all the Polynesians were of the Aryan race; that they first entered India, became mingled with the Dravidic race, and afterward were driven out and established themselves in the Indian Archipelago; but here they were followed by Brahminized or Buddhistic Aryans from the eastern coast of Deccan and that they were driven by them from the Indian Archipelago into the islands of the Pacific. Mr. C. Staniland Wake doubts whether the Polynesians do not possess as many features in common with the Papuans as with the Caucasian tribes of Indo China. He maintains that a straight-haired race belonging to a so-called Caucasian stock, of which the aboriginal inhabitants of Australia are the purest modern representatives; that these were the ancestors of all these Papuan and Polynesian people. The eastern Polynesians are light brown, or coffee color. The Papuans are sooty brown, or black color. The eastern Polynesians inhabit New Zealand, Friendly Islands, Sandwich Islands, Marquesas, Tahiti and the Hervey group. The western inhabit New Guinea, New Britain, New Ireland, New Hebrides, New Caledonia, Solomon's Island, the Admiralty groups.

**SIERRA LEONE.**—A description of the inhabitants of Sierra Leone is found in the same journal. The Krooman are mentioned. They are Pagans. They wear articles or ornaments as fetiches, amulets, talismans, charms, greegrees (if anyone knows the difference). They used cooking pots made of clay. The Mundis are also Pagans, but the Mandingoes are Mohammedans. The Foulahs are traders from the interior, who bring with them gold, ivory, and various articles. They make sandals, gold rings, with the signs of the Zodiac upon them. They are Mohammedans.

**GIGANTIC IDOLS.**—The gigantic wooden idols met in the islands of the Pacific are said to resemble the idols and other figures found at Chichen Itza and in the various ancient cities of Central America. This thought has been broached several times within several years, but has never been carried out in detail, or the resemblance shown in full. If there are any archæologists who are familiar with the idols and other carved or sculptured figures found in the islands of the Pacific and will give us some further information on this point we should be grateful. We are approaching the time when some of the symbols and idols of Mexico and Central America will be traced with a certainty to either one or another of several extra



limital points. It is a question whether it will be in Polynesia, and from Polynesia to the southern Asiatic coast, or Japan, China and the northern Asiatic coast.

THE ELEPHANT'S TRUNK.—An ornament resembling an elephant's trunk was seen by Stephens projecting from the wall of the building called the nursery. Charnay has given a photograph of the same building, but he thinks that the whole of the grotesque ornamentation in its details reminds one of the Japanese, that these figures which have been called elephants by Waldeck and others, are types which resemble Japanese or Chinese ornaments. This is an important point.

---

#### BOOK REVIEWS.

*Sixth Annual Report of the United States Geological Survey 1884-1885*, by J. W. POWELL, Director, Washington, D. C., 1885.

We have taken up this report and found it exceedingly interesting. So different is it from the ordinary reports of surveys that we can cordially recommend it as a book for any one to read. Captain Clarence E. Duncan describes the Mount Taylor and the Zuni plateau with great vividness. It is the first description which has given to us a picture of this region, or at least a picture which we could understand. Other reports have given only sections, but no such general view as this. The driftless arrear of the upper Mississippi is next described by Profs. T. C. Chamberlain and R. D. Salisbury. This is a very interesting region and abounds with fine scenery. The engravings in the volume which indicate the different rock formations and interesting topographical features are very beautiful. Sea-coast swamps of the eastern United States, by Prof. N. S. Shaler, occupies about thirty pages. The balance of the report is taken up with a synopsis of the flora of the Laramie group by Lester A. Ward; very technical and full of tables. Upon the whole we think this is the best report which has been published. It is certainly one which reflects great credit on the director of the survey and all who operated with him. The citizens of the United States are to be congratulated on having so intelligent a corps of surveyors to examine the geological structure of the new territories in the interior and to describe the country in so clear and graphic a style.

*Proceedings of New Jersey Historical Society*, Second Series, Vol. 9, 1886-7.

"The Early Cities of New Jersey, by Austin Scott, Ph. D.," read Jan. 25, 1887.

Perth Amboy, 1718; New Brunswick, 1730; Burlington, 1732; Elizabeth, 1740; Trenton, 1746. Five cities received charters about the same time. Philadelphia, 1691; New York and Albany, 1686; Annapolis, 1708. Thus the chief cities of the Atlantic coast received charters within fifty years of one another. The article is an interesting one.

"Historic Old Tennent," by Robt. C. Hallock, pastor of Old Tennent Church. Read May 19, 1887. The home of the Tennents, John, 1707; William, 1733; David Brainard, George Whitfield and John Woodhull is certainly worthy of commemoration and may well be called the "Historic Old Tennent."

*Conewago, A Collection of Catholic Local History*, gathered from the fields of of Catholic Missionary labor within our reach. By John T. Reily, 1885.

An humble effort to preserve some remembrance of those who have gone before, and by their lives, their labors and their sacrifices, secured for succeeding generations the enjoyment of happy homes, and all the blessings of our holy Catholic religion. Conewago Valley a hundred and fifty years ago was a dense forest of oak and hickory. Tradition has preserved but few names of the first settlers. It is filled with a Catholic settlement. In an ethnological sense, the valley is occupied by Germans, Irish, and English, most of them by birth and education Roman Catholics. Conewago chapel is the parent church from which the Catholic religion spread over Southern and Western Maryland into Virginia, along the frontiers of Pennsylvania into Philadelphia itself. This pamphlet of two hundred and twenty pages contains a history of the different churches and priests.

*Ancient Nahuatl Poetry*, containing the Nahuatl Text of XXVII. Ancient Mexican Poems, with the Translation, etc. By DANIEL G. BRINTON, A. M., M. D. Brinton's Library of Aboriginal American Literature, No. VII., pps. 177.

The poetry of the primitive and uncivilized races is an interesting object of study. There is considerable similarity in it, whether produced by the Aborigines of America or by the wild tribes of Arabia. Even the early productions of the religious rhapsodists of the east have some points of resemblance to the religious songs of the west. The earliest literature of most races is in a sense poetical and some of the best poetry extant comes from the early times. The minstrelsy of Europe preceded modern literature and the poetry of Homer and the Greek tragedies may be regarded as a kind of minstrelsy. In the Nahuatl literature we have the most primitive specimens of poetry, and at the same time we have a description as to how the poetry was recited. It appears that the rhythm of song and the rhythm of motion were united. The song and the dance were associated, and under the contagion of the rhythmical motion whole audiences would pass hours intoxicated with the movement. The concerts were held on ceremonial occasions in the open air. Different kinds of instruments were used, such as drums, gongs, rattles, flutes, pipes, cymbals, etc. There was a large body of poetic chants which was written down by the Nahuas in their books. This poetry reminds us of the Arabic poetry which has been translated by Sir William Jones.

• *Totemism*. By J. G. FRAZER, M. A., Fellow of Trinity College, Cambridge; Edinburgh. Adam and Chas. Black. 1887.

This book is made up of the material of the article on Totemism, prepared for the Encyclopedia Britannica, but elaborated and made larger. It contains 96 pages of closely printed matter, with an immense number of notes or references. We notice that the *American Antiquarian* is frequently referred to, and such writers as Rev. J. O. Dorsey, Rev. Mr. Beauchamp, Dr. Horatio Hale, Dr. D. G. Brinton, Rev. M. Eells, Mr. A. S. Gatschet, the editor and others are quoted as authority. It is the best work on Totemism ever published. It confirms the positions which the American writers have taken, but brings out a few new points. Among the points the fol-

lowing are noticeable: Totems are of three kinds: First, the clan totem; second, the sex totem; third, the individual totem. The sex totem has not been explained before. The author also speaks of modifications of these different kinds of totems, as for instance the split totem, by which is meant the part of the animal instead of the whole animal, *e. g.*, the head of a tortoise, the stomach of a pig, etc., were tabooed, while the rest of the animal could be eaten; also cross totems, which mean the ends of things, *e. g.*, the ends of yams, bananas; fish were tabooed, while the rest could be eaten. The Sacs and Foxes regarded bones as tabooed; the Blackfeet's blood; the Samoan the eyes of fish; the Omahas small birds. Inanimate objects also are used as totems; in Australia the thunder, rain, hot wind; in New South Wales, honey; in America, ice, thunder, earth, water; in India, the foam of the river; in Samoa, the rainbow. The manner of exhibiting the totems varied. With some tribes the custom was to wear the totems on the dress. Others tattooed them on the person; Others carved them upon posts; others painted them on their tents; others affixed them to treaties. The book treats of birth ceremonies, marriage ceremonies, initiatory ceremonies, death ceremonies as connected with the totemism. It also treats of geographical diffusion of totemism, the social aspect of totemism. Our readers will undoubtedly be glad to read this book, and we shall be happy to put it into their hands if it is possible for us to do so.

*Ancient Cities of the New World*, being Voyages and Explorations in Mexico from 1857 to 1882. By DESIRE CHARNAY. Translated from the French by J. Gonino and Helen S. Conant; New York; Harper & Brothers; 1885.

This is a magnificent book and one that does credit to the publisher and the author. The illustrations are in the highest style of art. Many of them are entirely new and represent objects which M. Charnay discovered and which have not been described before. There are a few engravings which bring before us objects which have been long familiar, but as they are taken from photographs and not from drawings they seem almost like new pictures. We refer now to the sculptured stones and the facades of the temples and palace at Palenque. These have already been engraved and were published by the Harpers in Stephen's travels. The new engravings taken from photographs show that many changes have taken place in these ancient monuments. If they were in ruins at the time that Stephens discovered them, they are much more so now, and yet the general appearance of these palaces enable us to recognize them again. Though the sculptured tablets are all gone and all the ornamentation has been despoiled, the piers and lintels and in some cases the roof are still remaining. In one case however that of the ruins of the palace at Kabah, the ornamentation is still in good condition and the photograph has brought out the beauties of the sculpture on the facade in a remarkable manner. The building called the nunnery at Uxmal is also brought before us with new clearness. In fact all the buildings at Uxmal are so well preserved that the photographic pictures are like a new revelation. They show the wonderful elaborateness of the sculpture as nothing else has. One advantage in the photograph is that whole buildings, and in fact pyramids with buildings on them, are as accurately taken as the parts of buildings, and so we have a bird's-eye view of the temples and palaces of the ancient Mayas and Nahuas. Occasionally a new sculp-

tured facade, a new colossal head carved or molded, or a new tablet surprises us as we look over the engravings, and our curiosity is excited. The book is written in a narrative style, describes the incidents of travel, and the way in which the ruins were reached. There is occasionally a discussion, however, on some mooted point, as for instance, the existence of the Toltecs as a separate nation and the characteristics of the Maya race. but the bulk of the volume is taken up in descriptions of the architectural ruins and archaeological relics which the author was permitted to see. The articles in the museum at Mexico are first described. These have already been made familiar by the descriptions sent to the *North American Review* at the time of Charnay's visit to Mexico. Next comes the description of Nahuallac cemeteries at Tenenpanco, found at the altitude of 13,000 feet, and of the relics which were exhumed from them. Next is the description of a temple at Belote and of a ruined palace at Homalcalco. These are new fields which have never been explored before, or, if they had, nothing has ever been published. After this we seem to be going over ground which is familiar: Pa-enque, Izamal, Chichen Itza, Kabah, Uxmal, Copan, Mitla. We occasionally however, take a trip to a new place, as at Campeche to the ruins of Tabasco the temples at Lorrillardtown. Here we find sculptured lintels which are quite new and are different from any before discovered. The photograph brings out the peculiarities of the figures, and we see not only the limbs and forms, but the dress and ornamentation and are led to admire the art which could imitate so delicately the pattern on the robes, the embroidery on the shoes and the tassels and fringes on the leg-bands, and all the details of the costume and head dress. Such accuracy is invaluable. It enables us to understand the symbolism which prevailed and gives us a better idea of the art which prevailed than anything which we have before seen. Our readers will certainly want this book if they are to become acquainted either with the state of the ruins or with the new discoveries which have been made.

*Records of Ancient Races in the Mississippi Valley*, with cuts and views illustrating over three hundred objects and symbolic devices. By WILLIAM McADAMS, St. Louis; C. R. Barnes Publishing Company; 1887.

This is a curious and interesting book. It treats of dragons, sphinxes, human footprints, crosses, animal effigies and other curious and out-of-the-way objects, the most of which have been seen by the author or concerning which he has received personal and private information. The main object of the author was, at the outset, to describe the pictographs which formerly existed on rocks overlooking the Mississippi river, below the mouth of the Illinois river, and which were first described by Marquette, the missionary. Out of this effort the work has grown into a book of twenty-two chapters and one hundred and twenty pages. The author first describes the pictographs on the rocks, including those on the bluff at Alton, Ill., and in a cave at St. Genevieve, Mo., and compares these with the pterodactyl. He then describes the foot tracks in a cave in Green County, Illinois, and others on the rocks near St. Louis. He also describes a deposit of bones in a cave near Grafton, Ill., and speaks of a pipe from a mound at Grafton. Burial vases and the pictographs or hieroglyphics on them are next described. The spiders inscribed upon shell gorgets with their symbols are

also spoken of and the cross is recognized. Effigy mounds occupy two chapters and many specimens of the effigies are given. Bone paths in Dakota and skulls from the mounds are described. The great mound at Cahokia is also spoken of at some length. The origin, migration and fate of the mound-builders are discussed in the concluding chapter. The author includes in his descriptions not only the pictographs on rocks, but the figures on pottery and on shells as well as the animal figures found in the effigy mounds and a few of those carved on the mound-builders' pipes. His treatment of the subject is mainly local, though he occasionally draws from Schliemann and other authors for comparison. He takes the position that there are traces of an inherited symbolism that the same symbols which are found in the historic countries, such as the dragon, the sphinx, the cross, and the Suastika are found among the mounds, and they are the results of borrowed symbols or a remembered cult and not of a development on American soil. As to some of the figures, such as the cross, many archaeologists will agree with him, but it is a question whether sphinxes or dragons are to be found in America. The figures which are described by the author represent neither of these fabulous creatures. The book is well illustrated and is valuable as a collection of pictographs and symbols from a locality which has not been explored except by the author. We hope it may find a ready sale.

*Bibliography of the Eskimo Languages*—By JAMES CONSTANTINE PILLING. Washington Government Printing Office. 1887.

This is a book which will be appreciated by the students of the American languages. It seems remarkable that so many books should have been written on the Eskimos and still more remarkable that a single individual should have seen nearly all that have been written. Mr. Pilling has, however, visited nearly all the prominent libraries in this country and many of those in Europe and has been making a specialty of this study for many years. It is a fortunate thing that the government has made appropriations so that these studies could be carried out and the titles of the books accurately jotted down, and a thorough and complete catalogue of them prepared and published. Mr. Pilling's work differs essentially from that which has been done by others in similar fields. It is much more thorough and satisfactory for time and painstaking are required above all things in a bibliography. We find the names of many well known authors in this pamphlet as follows: L. Adam, Adelung, Barton, Bancroft, Boas, Buschmann, Charency, Dall, Drake, Franklin, Gallatin, Gibbs, Haldeman, Heckewelder, V. Henry, Peter Kalm, Latham, Latrobe, Lessups, John Long, Morgan, F. Muller, John Murdoch, Rev. E. Peck, A. L. Pinart, Prichard, H. J. Rink, Ross, Schwatka, Turner, Vater, Whympier, Wrangell. These are names taken at a glance, but they show how great a variety of books is contained in the list.

*The Science of Thought*—By F. MAX MULLER, New York. Chas. Scribner's Sons; 1881; two vols., \$4.00.

This is a work which covers a great deal of ground. It includes not only the science of mind, which treats of the concepts and percepts, but also of the relation of mind to matter. The author discusses the Darwinian theory to considerable length. In some respects favoring and agreeing with Dar-

win, but differing from his main position as to the descent of man from the animals. Language and thought are correlated. Thought in the sense of a blind force which passes through a material brain may exist among animals, but there is now power of abstract reasoning or of generalization. Language as an expression of emotion is used by the animals, but as an expression of the higher reasoning process is lacking.

*Conventionalism in Ancient American Art.* By F. W. Putnam, curator of the Peabody Museum, etc. From the Bulletin of the Essex Institute, Vol. XVII, 1886; Salem, 1887.

The study of conventionalism in the prehistoric art of America is at present in a very rudimentary condition. Prof. Putnam deserves thanks for calling attention to it in one line, though that line be very limited. He has taken the pottery vessels found in the stone graves in Tennessee and pointed out the various animal forms which are imitated, both in the shape of the vessels and the moulded decorations on the surface of them, and has shown how some of these forms have become reduced to mere conventional marks, e. g., the ears and nose and mouth becoming mere dots or marks on the sides of the vessel, or the legs of the frogs becoming handles, and the form of the fish which were used for legs becoming rude shapes, which might suggest the fish, but poorly imitated. The pamphlet is a valuable one, as it strikes upon a subject which is very rich, especially when followed upon a broader and more comprehensive plan. There is undoubtedly much conventionalism in American art, but it is more fully developed in the carved figures on stone and in the engraved figures on shell found among the mounds than in the moulded figures on pottery vessels. The comparison might well have been drawn between these different products of the Mound-Builders' art, and conventionalism might have been traced in them all. The comparison might also have been drawn between the Mound-builders' pottery and that found among the pueblos of the west, and conventionalism might have been traced in both. The shapes of vessels shows much evidence of conventional styles which follow the introduction of novel and original forms as do the decorations on pottery. Prof. Putnam, however, calls attention to some points which have great interest. He thinks the realistic representation or imitation of objects was first, and that this often sprang from a mythological source. In course of time the realism led to representation by conventional characters. It was during this stage that the art of one particular center of development infringed upon another and left its marks in conventional forms, the imitative forms being undistinguishable in the two localities. He says while a comparison of these various forms of art expression may not necessarily prove the routes which different peoples have traveled during their migrations, it does indicate their points of contact. He then refers to the pottery from the stone graves of Cumberland Valley Tennessee and from the burial mounds in Missouri and Arkansas as if there had been a contact between the peoples of the two districts. He might also have referred to pottery vessels which have been found in the stone gyats or chambers of Missouri, and which resemble vessels found among the Pueblos and Cliff Dwellers of the far west; and which show that there was a contact between these two people either in prehistoric or protohistoric times. The very architecture of their tombs proving the contact as well as the character of the pottery. He calls attention to another

point which might be carried out to good advantage. He says "with the ancient Mexicans the higher ceramic art was more symbolical than conventional. The ancient Peruvians, too, \* seem to have been lacking in these methods of conventional representation and their highest art may be called realism. In the region of Lake Titicaca another type of art expression exists. \* \* \* There is enough to show a remarkable resemblance to those early old world forms which culminated in the classical type of the Mediterranean peoples. Now it is to this last point that we call special attention. Nothing is more striking than the resemblance between the conventional and the symbolic art forms of the old and the new world, and yet nothing more thoroughly baffles the investigator than the effort to trace the connection between them. It hardly seems possible that these resemblances are owing to parallel lines of development for the resemblances are too minute. It is profitable to trace out the conventional forms in America and separate them from the realistic and imitative. If we eliminate the conventional from the symbolic we may be also further assisted in our work. By discovering what is purely American we may have a residue which will be Asiatic, and so we may discover the source of considerable of the symbolism in this country. The subject is at least suggestive.





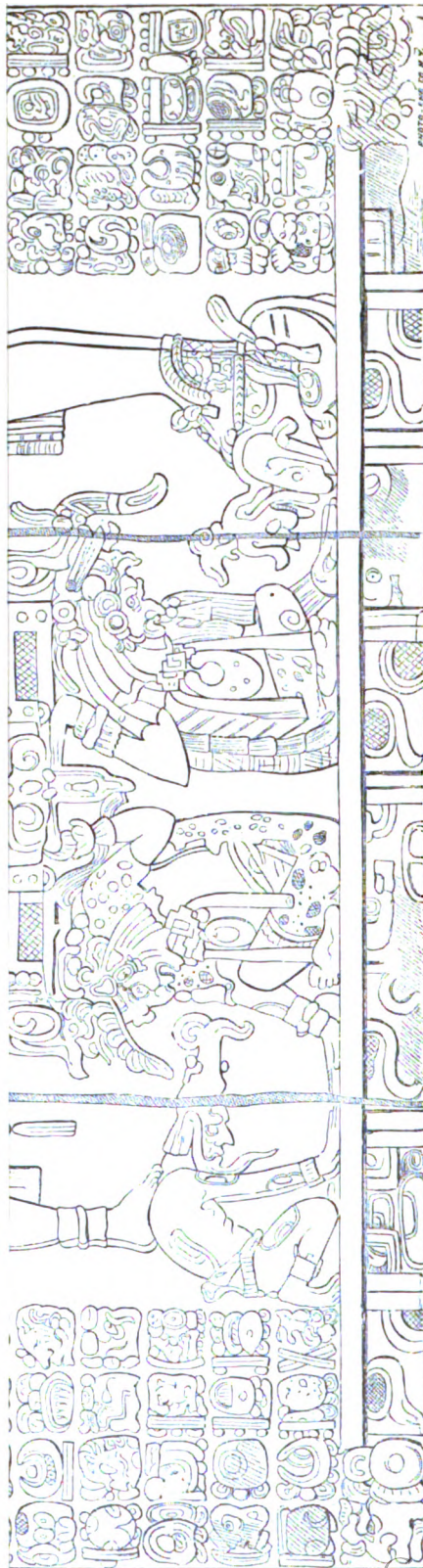


Plate III. Face of the Sun.

THE  
*American Antiquarian.*

VOL. X.

MARCH, 1888.

No. 2.

*Part. V. D*

**ANIMAL WORSHIP AND SUN WORSHIP IN THE  
EAST AND THE WEST COMPARED.**

The prevalence of sun worship throughout the different parts of the globe is impressed upon us as soon as we enter upon the subject of primitive religions. The early historic records show that it existed extensively at a very ancient date. Traditions and mythology are full of allusions to it, showing that it prevailed before historic times. Language seems to have been affected by it. The very form of letters and the phonetic signs in certain languages contain tokens of it. The earliest forms of art were also impressed and influenced by it. The symbols on coins are frequently symbols of the sun, as well as of the serpent and the tree. Ancient architecture exhibits sun worship as prevalent. The very forms of the temples were constructed so as to make the worship of the sun more impressive. The symbol of the sun is also found in the clothing of the priest and in the furniture of the temples, as well as in the adornments of the idols. Hieroglyphics are everywhere full of the same kind of symbolism. All of these tokens convince us that it was a most extensive system and one out of which other religious systems have grown.

This sun worship may have been preceded by more primitive systems, viz.: animal worship, fetichism, animism, shamanism, etc., but it seems to have been more powerful and more extensive than any of these, and therefore is worthy of especial study.

We may regard it as a form of universal religion, a form which reached the stage of universality before historic times. We may also consider it as a connecting link between the historic and prehistoric ages; a system which survived into historic times, but grew out of a prehistoric cult, the product of the highest stage which had been reached, but at the same time the blossom out of which the fruit grew for the next stage of culture.

How long sun worship may have continued during prehistoric

times no one knows, but there are so many grades of it that we may conclude that it had continued for a long time. The change from sun worship to anthropomorphic systems was evidently slow. In some countries it took centuries to reach the first stage of idolatry, the animal figure changing slowly to the idol as a human semblance. Animal worship and sun worship were, however closely associated in prehistoric times, and these were perpetuated in parallel lines even long after history began. The human semblance seemed to have been a late conception, and yet we can trace in this country the idolatry which contains the human semblance back into prehistoric times. It is probable that all three of these types of nature worship were even in the East quite prevalent before the historic period.

I. We turn now to consider the connection between animal worship and sun worship. Why are animal figures and sun symbols so closely associated?

In answering this question we shall compare the symbols of the East and the West, but begin with those of the East.

The symbols of Egypt are first to be considered:

Let us consider the different animals which were sacred to the sun. (1). The phoenix. This was a bird of the sun. Its general appearance was similar to the eagle. It had a gold collar about the neck, the breast was purple, its tail blue varied with red feathers, its head richly feathered with a tuft at the top. According to the fable there is only one on the whole globe. It lives 660 years. When it grows old it builds a nest and dies. A worm is produced from its bones which, having become a young bird, takes the nest and carries it to the city of the sun and deposits it on the altar. (2). The bull was a sacred animal and received divine honors as representing a divinity. His prolific character was considered a divine attribute. The bull was sacred to the sun and carried the globe on its head between its horns. The bull was a symbol of Apis, one of the chief divinities of Egypt. The ox-headed divinity Sarapis (Osiris Apis) was also a great divinity; the personal and the animal nature of the god being represented both by the name Sarapis and the idol, which was a human form with an ox-head.

(3). The hawk was a symbol of the sun in Egypt. The god Ra was usually represented with a hawk's head surmounted by a globe or disk of the sun from which the asp issued. The hawk was a symbol because it was able to look into the face of the sun.

(4). Lions were considered solar animals. Ra, the hawk-headed divinity, was sometimes supported on the back of lions. We shall hereafter speak of the lions whose bodies formed a throne. Sometimes these lions were separated and were represented as lying down with their heads in opposite directions, the disk of the sun between them. The lion represented strength and so was a symbol of the sun.

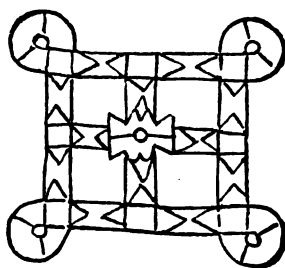
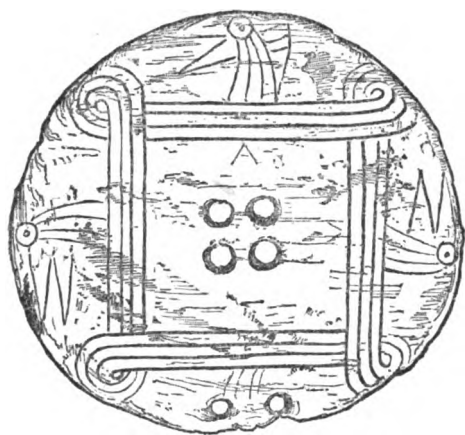
(5). The scarabeus or beetle was in Egypt a symbol of the sun. Some suppose this was owing to the habit of the beetle of rolling the ball of dirt or dung to its nest. Others say that the scarabeus, with its many claws, symbolized a month, thirty claws for thirty days. The scarabeus was worn on the head of Ptah, the Egyptian Vulcan, or Hephæstus. A symbol for Ptah is given by a combined figure, viz.: a man kneeling and supporting the four-armed symbol or emblem of stability on his head. Above this emblem is a beetle with wings spread, holding up in its claws a globe or sun. The scarabeus was the commonest ornament in Egypt, and shows how prevalent sun worship was there. (6) The frog was used as a symbol of the sun. There are divinities having frog heads, but generally the heads are surmounted by a scarabeus. Ka, father of the fathers of the gods, is a frog-headed deity. The frog-headed divinity was probably the ruler of the water. Horopollo tells us that "Man in embryo was represented by a frog." Diodorus Siculus says that "man was created out of the mud." The frog was the father of the gods and men. (7) The goose was a symbol of the sun. Set, the great cackler, was one of the divinities of Egypt. He is identified with the earth. There is a myth that the sun is discharged from the earth as an egg from the goose. (8.) The cow was worshiped in Egypt. Athor was a cow. She is represented by a cow's head bearing the disk of the sun between her horns. Her eyes were supposed to be symbolic. Her right eye represented the sun; her left eye the moon. Symbolic eyes were common in Egypt. They were used as ornaments or amulets, very much as beetles and lions were. Ear-rings, bracelets and necklaces having eyes in them were worn as ornaments. (9.) The vulture was a symbol of the sun. The body of the vulture was worn by the goddess Nephthys, "daughter of the sun," "lady of heaven". The vulture with the wings spread was placed over the heads of queens to denote generative power, motherhood. Besides these animals, the ram, the fox, the jackal, the dog, the hippotamus, the goat, the eagle, the crocodile, were sacred in Egypt and most of them were symbols of the sun. The elephant, the buffalo, the camel were sacred in India, but not in Egypt. The stag, the panther and the lion were sacred among the Hittites, but not among the Hindoos. The leopard, the lion, the dolphin, were sacred in Assyria. The vulture and eagle were very ancient symbols in Babylonia.

II. We ask the question here, how about the history of animal worship and sun worship in the old world? We come back to the new world for the answer. It is a singular fact that animal worship and sun worship in America passed through many stages, but in these stages we see a constant association of symbols. One thing is noticeable about this association in America; the animals are first made rulers of the sky before the sun divinity is, or at least the animal fetiches are supposed to

rule the different quarters of the sky in a more primitive stage of religion than are the sun divinities.

Animal worship was in the ascendancy among all the uncivilized tribes, but sun worship was prevalent among the civilized and a combination of the two may be also discovered among certain barbaric tribes. The primordial germs of the two systems are found in America. We propose to consider the association of animals with sun symbols as they are found in America. 1. This association is found in the mounds. We have already in previous articles shown the prevalence of animal worship. We propose to show now the prevalence of sun worship. It is well known that the sun symbol is found in the mounds. The shell gorgets which have been taken from mounds in Tennessee and other states have been described by W. H. Holmes and others. These contain four concentric rings. In the outer ring are found circles to represent the sun, numbering from ten to twelve, corresponding to the months. In the second ring are found four or five other circles, corresponding, perhaps, to the seasons. In the inner circle are three crescents to represent the moon, and at the center is a circle which represents the sun. There is no doubt that these gorgets were sun symbols. There are no animal figures upon these, but there are other gorgets in which birds and sun symbols do appear. We give cuts of these to illustrate the points. It will be noticed that the birds' heads are attached to a four sided figure which has loops in the corners. These possibly may have symbolized the four quarters of the sky or the four seasons. See Plate I. Within the four-sided figure is a symbol of the sun, which in one case is a single circle with a dot in the center; in another case four rings to symbolize four suns; in another case a ring with four dark spots surrounded by a ring with eight radiating points; another with birds' heads, and one figure has no birds' heads or sun symbol. The number four seems to have been sacred, as it symbolized the four quarters of the sky, but it is in every case attended with the symbol of the sun. These gorgets were taken from a mound in Tennessee. They show that sun worship had reached a very considerable height among the Mound builders.

2. The association of animal figures with sun symbols is found on the northwest coast. Here we have totem posts surmounted by the thunder bird. Below this are bears' heads to represent the totem of the person who erected the post. Along with the bears' heads are human faces and parts of the human form to represent the ancestors. The sun symbol is not found here, but the human form is found. A primitive form of animal worship as the embodiment of nature powers is seen in the thunder bird. We give a cut to illustrate this. See Fig. 1. Here the thunder bird is a guardian divinity to a house; it hovers over the door. This was a form of worship which pre-



*Plate I. Shell Gorgets containing Sun Symbols.*

veiled in the forests. It was not the worship of the sun, but of the elements. The bird which personified the lightning hovers darkly over the forest. It shows how animal divinities began to rule over the sky, and were transferred to the heavens. If we would see the sun symbol and animal figures and the human form combined we must turn to the Zunis. Here we find on the shield of the Priesthood of the Bow a winged human figure with an animal on either side and a curved body above the figure with a crooked serpent below; the serpent to represent the lightning; the body represents the rainbow; the shield itself represents the sun; the wings represent the clouds, and the bears the presiding fetiches or animal divinities. See Fig. 2.

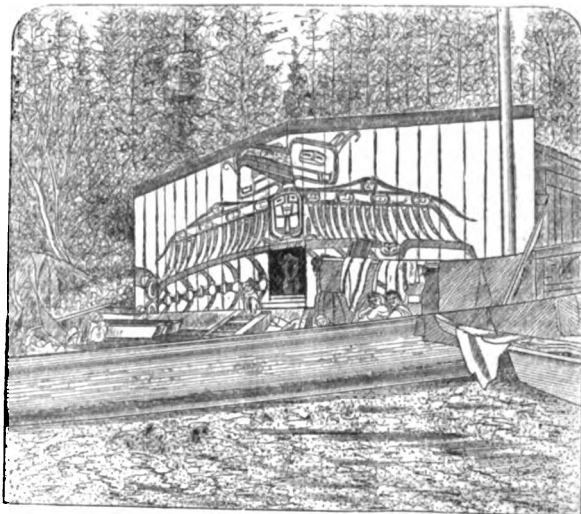


Fig. 1. *Thunder Bird of the Thlinkits.*



Fig. 2. *The Shield of the Priesthood of the Bow.*

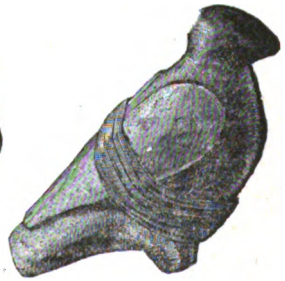
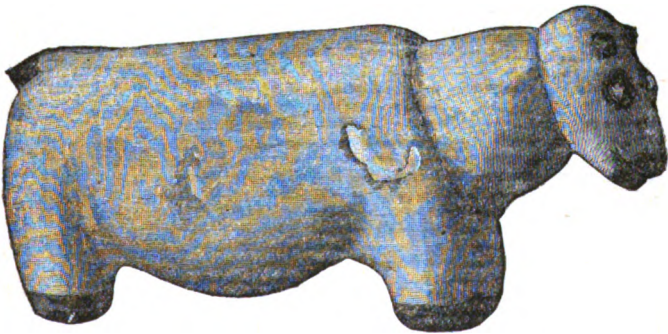
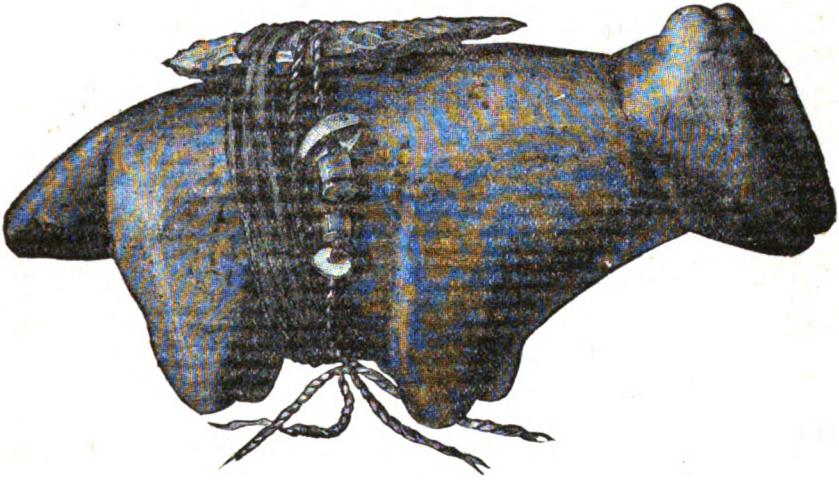
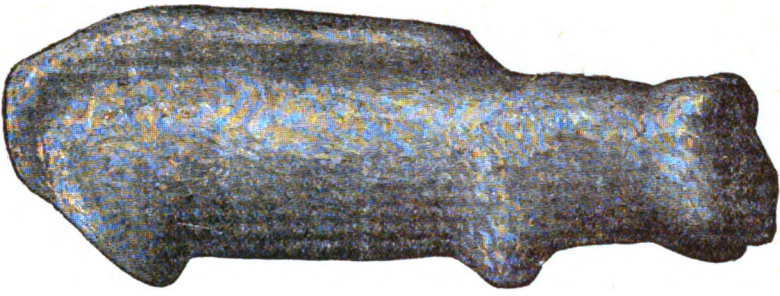
of the north; (2) the black bear, master of the west; (3) the badger, master of the south; (4) the white wolf, master of the east; (5) the bald eagle, master of the upper regions; (6) the mole, master of the lower regions. These different animals had colors which corresponded to the natural colors of the regions over which they presided. The mountain lion yellow to correspond with the

itself represents the sun; the wings represent the clouds, and the bears the presiding fetiches or animal divinities. See Fig. 2.

3. A better illustration of the manner in which animals came to symbolize the sun and sun symbols came to be associated with animals is found among the Zunis. Here we find that different animals presided over the different parts of the sky. Plate II. The mountain

lion (1) was the guardian





*Plate II.*



auroral hues; the black bear had a black coat to represent the color of the land of night; the badger was black and white and corresponded to the land of summer; the coat of the wolf was white and gray, the color of the day and dawn; the eagle was speckled like the clouds; the mole was black, the color of the caves of the earth. The figures or fetiches of these animals were kept very sacred. They were wrought out of different kinds of stone; and were painted to represent the colors of the sky. Sometimes different varieties or species of the same animal were supposed to be the masters of the different parts of the sky, but in that case they were wrought out of different kinds of stone to show the part of the sky over which they ruled. One mountain lion was made of yellow lime stone to represent the north; another of white lime stone to represent the east; another of serpentine nodules, which were blue, to represent the west, the color of the ocean. The spotted lion was made from a white and blue arragonite to represent the sky, and the fetich of the lower regions, made of gypsum, was painted black. This use of colors along with the animal fetiches is very significant. In Egypt the animals and idols are of different colors. Each color was significant not so much of the quarter of the sky as of the character of the divinity, and yet it possibly may have come from the same source.

4. Mexico furnishes another stage of animal worship and sun worship combined. We have now the four quarters of the sky symbolized, but in a different way. There is a dragon which rules. The days are also taken into account. Every day has an animal divinity. The months are named after animals and so are the years. There is a constant round of animal symbols. There is a complicated way of counting time. The days of the month change names. A new symbol is given to every day of the month as it passes, but most of them animal names; 1, fish; 2, wind; 3, house; 4, lizard; 5, serpent; 6, death; 7, deer; 8, rabbit; 9, water; 10, dog; 11, monkey; 12, hay; 13, reed; 14, tiger; 15, eagle; 16, bird; 17, the sun; 18, flint; 19, rain; 20, the flower month. See Fig. 3. We have also in Mexico colors—south, yellow; east, red; north, white; west, black. We have the elements, earth, water, air, fire. We have the chief divinities, Quetzalcoatl, Huitzilopuchtl, Tezcatlipoca, Tlaloc, corresponding to the elements and to the colors as well as to the gods of the skies and a most elaborate system of symbolism to express chronology and to mark out the sacred feasts. The symbolism of Mexico and Central America is very elaborate and shows a great advance upon the symbolism of New Mexico, the Aztecs and Toltecs having been much more civilized than the Zunis and other Pueblo tribes, but sun worship was the religion of all three districts. Animal figures are also used as symbols in all of the above mentioned regions.

5. There are many figures of animals in Mexico and Central America which are evidently used as symbols of the sun. M. Habel has described the figures which he found in the Cosumalhuapa. These are very remarkable figures. We shall describe only two. The main feature of one is a bird with huge wings in a very contorted attitude. The bird wears on his breast a flaming sun, but carries in his beak a human body in a very contorted shape. Two serpents hang below the head. The whole figure conveys the idea of violence. Its significance is unknown, but it is purely American. It is tinged by the

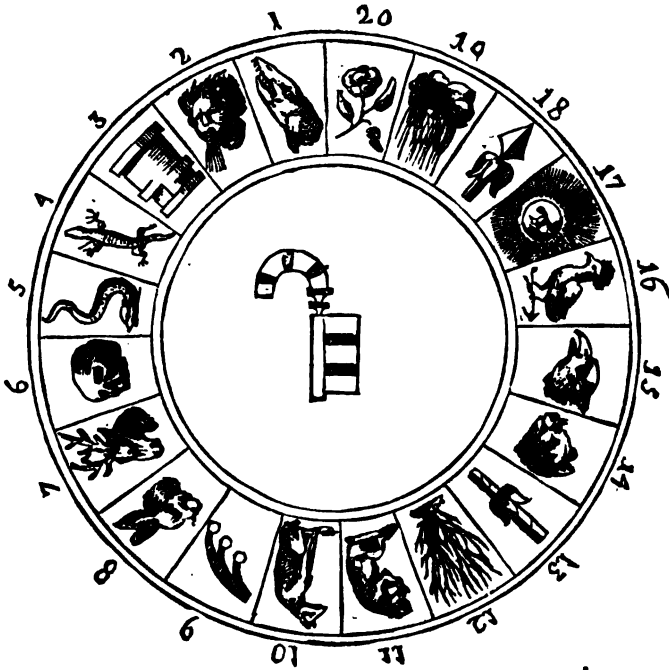


Fig. 5. Circle with Symbols of Days.

savage thought of America and yet it reminds us of the Asiatic figures. It has probably represented the thunder bird as presiding over or carrying the sun symbol. There is another figure which also reminds us of the Asiatic symbols. A face shines out from the sky, a symbol of the sun. Flames issue from the face to represent the heat of the sun. Behind the face are massive wings, perhaps to represent the clouds. Below the wings are arms with bird claws for hands. Below the hands is a circle with flames issuing from it. A serpent is intertwined through the circle. Below the circle is a suppliant with his hands held up in adoration to the winged figure. Here we have also the component parts of the sun symbol; the human

face, the sun circle, the overshadowing wings, the intertwined serpent, but we have also animal figures associated with it.

The Aztec cycle\* was represented with a circle with a picture of the sun in the center. See Fig. 4. There were symbols for the months around this sun circle, as follows: 1, water; 2, tent; 3, bird; 4, tower; 5, face; 6, vase; 7, flower; etc.

6. This furnishes another point of comparison. There were in Egypt four suns: the rising sun, the mid-day sun, the setting sun, and the sun at rest or the night sun. A divinity was assigned to each of these portions of time and a different animal represented each divinity or typified each sun. These are as we remember them, the lion for the rising sun, the ox for the



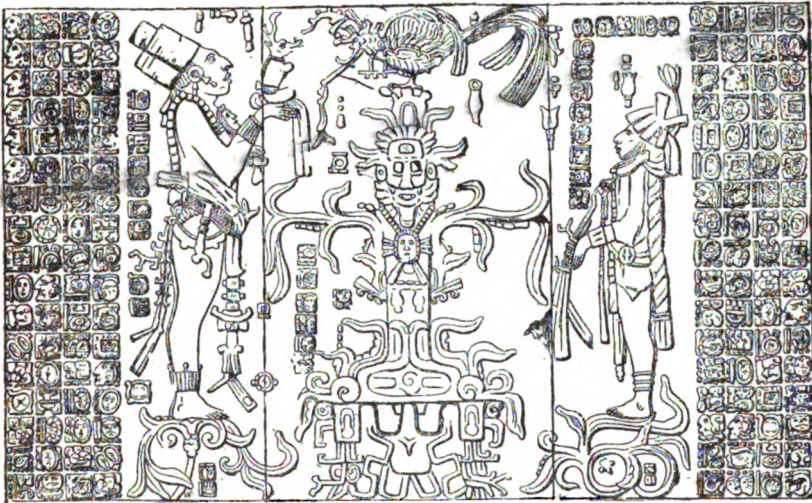
Fig. 4. Sun Circle, with Symbols of Months.

mid-day sun, the hawk for the setting sun, and the cow for the night sun or the sun at rest. We find in Egypt also animals presiding over different parts of the country: Anubis, or the jackal, over the south; Sebo, the ram, over the north; Buto, or the winged asp, over the west; Apis and Osiris over the east. We have also animals and gods which preside over specific towns—Thebes, Memphis, Dendera, etc.—others over two countries. We have animal gods which preside over feasts and and funerals, etc. This, to a degree, is common in America.

\*For names of the months and the divisions of the year and days see "The Aztecs, by Lucien Blart, pages 62 and 63." We are indebted to A. C. McClurg & Co., for the use of these cuts.

There were different kinds of suns and different animals to typify those suns. The points of compass were also typified by different animals and different colors were given to the animals to signify the parts of the sky over which they ruled. There were different districts and different animal divinities which presided over those districts, the same as in Egypt and Assyria.

III. We are to consider next the significance of the animal forms which are found in the symbols of the east and west. It has been maintained that the animal heads and other parts of the animal form which are associated with human bodies and faces in the gods of Egypt, Assyria and Farther India were but the symbols of divine attributes. This may be so, and yet there is another view which may be taken



*Fig. 5. Tree and Cross as Symbols of the Sun.*

of them. In America animal worship preceded sun worship and was perpetuated after sun worship came into vogue, and so we have the means of interpreting the system, which others do not have.

We do not, however, learn that the animal forms which are combined with human semblances in America had anything to do with the attributes of the divinity, but we do learn that they were, in a measure, Totemic, that is, they symbolized the relation of guardian which was contained in divinity and at the same time expressed the personification of nature powers.

I. It is noticeable that the different parts of the human form in America symbolized nature powers. The eye of Tlaloc, the Mexican god, shows that he was a rain god, the tongue and face of Quetzacoatl show that he was a sun god, while the dress and ornaments of Huitzapochtli show that he was the god of war and death. This use of ornaments and the parts of the costume

and head-dress to symbolize the elements over which a divinity ruled was very common. It is well known that the serpent and the cross were symbols in Mexico and in Central America. There were, however, weather symbols, the one signifying the lightning and the other the winds or the points of the compass. There is evidence that the tree is used as a symbol in America, but singularly enough the branches of the tree are frequently made to represent the cross, and so the tree becomes a weather symbol. The cross and the tree is generally surmounted by the thunder bird and is sometimes decorated with a mask and medallion, and with spiral ornaments, each part of the cross and its decoration having a significance and the whole being symbolic of the sun and of nature worship. See Fig. 5.

None of the American symbols represent personal attributes, but they do represent the office of the divinity, and in this they differ from the Egyptian and Asiatic symbols. In Egypt the animals symbolized the attributes of the divinity, in America they symbolized the office. In Asia they symbolized the person, but in America the elements or nature power. This distinction is worthy of notice, because it shows that in America the religion was mere nature worship and was less advanced than in Egypt.

We give a cut to illustrate this point. Plate III. It is a picture of the bas relief on the inside of the adoratorio discovered by J. L. Stephens at Copan. This adoratorio was a shrine or altar devoted to the worship of the sun. Inside of the shrine a mask, which represented the face of the sun, was suspended upon two cross sticks or poles, while beneath the cross was an elaborately carved beam supported by crouching human figures. The whole temple or shrine symbolized sun worship, each separate part and article of furniture and ornament having a significance. The sun was symbolized by the face, the eye, tongue and lips of the face being distorted to make it expressive. It was situated in front of the door of the shrine, so that it might catch the rays of the sun, and was supported by the cross bars, which symbolized the points of the compass. It was suspended above the heavy beam, on which was the skull, which symbolized the rain, and that was supported by figures which also symbolized the different nature powers. On the facade of the shrine were two figures, one of which is represented in Plate IV. This was Tlaloc, the god of rain. It will be noticed that this god has a peculiarly bulging eye resembling a huge rain drop; that he has on his head a head dress made up in part of the beak of a bird, in part of a branch of leaves and cones, and in part of spiral lines or vine stalks; that he is blowing through a tube, and that spiral lines issue from the tube. A crooked serpent is intertwined between his legs, but with the tail and head both bent upward, while tassels hang from the neck of the serpent. Thus the divinity is surrounded by the



Plate IV. The God Tlaloc.

symbols of his power—the eye to signify the rain, the serpent to represent the lightning, the spiral lines to signify the winds, the thunder bird to signify the sky, the leaves to signify the vegetation, and other ornaments, to signify the nature powers, over which he ruled. The picture is suggestive. It is not certain whether the form represents the god Tlaloc, or his priest, for priests were frequently clothed with the same kind of garments on their person and had in their faces the same symbols that the god himself did. It will be noticed that the figure has a tiger skin resting upon his shoulders. This was in Egypt the official dress of the priest of the sun, and the fashion seems to have prevailed in America. We do not find in the adoratorio many figures of animals, but the tiger skin, the thunder bird, and the serpent are animal symbols. We have also plants represented, and so the three kingdoms were drawn upon for symbols. Nature worship in America combined the solar symbol with animal symbols, and made many of the elements symbolic.

2. Another point is brought out by this comparison of the symbols. In the old world the animals which were worshiped were domestic, while in America they were wild. This shows that the symbolism in America either originated among the races when they were in the wild state or was borrowed from civilized people and accommodated to a wild condition. Animal worship in Asia continued long after the people reached a civilized condition and was evidently modified by civilization. Animal worship in America found its highest development among the wild hunter tribes, but it remained among the civilized races. Sun worship was incorporated with animal worship among the American Indians. The Mound-builders had a kind of nature worship. It was rude and primitive, and yet it was attended with sun symbols. Some of the mound relics evidently present the tokens of a combined animal and sun worship, and some even of combined sun worship and idol worship. The thought contained within these systems we are not familiar with, but we judge from the symbols. The progress in America was from shamanism to fetichism, and from fetichism to animal worship, and from animal worship to sun worship, and from sun worship to anthropomorphic figures. The symbols, however, represented the elements and were symbols of the nature powers

In Asiatic countries local animals were used for symbols and represented the attributes of the divinity. The animals differed in different countries, but they were the animals which abounded in those countries. In Egypt the animals used for symbols were the ox and the cat and dog; in Assyria, the ox, the eagle, the lion; in India, the ox, the elephant, and the horse; in Arabia, the ass, the ostrich, and the elan; in America, the wolf, the bear, the panther. There are also certain animals

which are everywhere found, as the hare, the deer, the stag, the eagle, and the hawk, but this is because these animals abound in all countries. In the same country the animals differ according to locality; the crocodile and hippopotamus in Egypt; the lion and the deer in Syria among the Hittites; the fish and the hawk in Assyria; the elephant in India. This is the case in America: on the northwest coast the whale; on the southwest coast the monkey; on the gulf coast the crocodile; in the interior the panther.

3. The use of compound figures is significant. Composite animals are discovered among the emblematic mounds of Wisconsin. The ancestor posts of the northwest coast are



*Fig. 6. The Water Spider, with Symbols of the Sun on its back.*

remarkable specimens of composite figures. They are made up of the beaks of hawks, the bodies of bears, human faces and many other shapes, each part being significant of the ancestry and of the divinities which the family regarded as sacred, the totems of the family for many generations being carved into a single pillar. Compound figures were common among the mounds.

There are gorgets taken from mounds in Missouri, which contain the figures of a spider (which was the divinity of water) with a circle (the symbol of the sun) upon its back, and a cross within this circle to symbolize the points of the compass. This reminds us of the beetle in Egypt whose claws symbolized the days of the month and was a symbol of the sun. It is quite wonderful that the Mound-builders should reach so high a stage of symbolic development. See fig. 6.



There is a temple built on the banks of the Ganges in Casi, Hindoostan, the body of which is built in the shape of St. Andrew's cross, with a very high cupola in the center. At the extremity of every one of the four arms of the cross is a tower, probably a symbol of the sun. Inside the temple is an altar, and on the right side of the altar is a strange figure, a compound of the different parts of an elephant, a horse and a mule. This shows that the elements or the attributes were symbolized by domestic animals.

4. The use of masks is significant. It is noticeable that masks are worn in all parts of the world, in America, Africa and in Asia. A hideous mask is worn by the priest of Thibet. It represents a human face with horns and other animal parts attached to it. Huge masks are carried by the Chinese in the feast of lanterns. Masks are very common on the northwest coast of America. They are worn in the dances and symbolize the mythical history of the dances and of the divinities in whose honor the dances are held. We do not know as any of the masks referred to have any connection with sun worship, but they are suggestive as they convey a thought in reference to mythology and history. The heads of animals which appear on the bodies of men in Egypt and Assyria symbolize animal divinities and the ornaments upon them symbolize the sun divinity, but they resemble masks.

It is probable that the attributes of the divinity were represented by these animal head. In America the animals themselves were regarded as divinities.

IV. The progress of the people in prehistoric times in religious culture is our next point. The transition of animal worship into sun worship and from sun worship into a reverence for the personal attributes is the thought now before us. The figures of wild animals are found among the emblematic mounds of Wisconsin protecting villages, guarding caches, forming game drives, marking burial places, and showing where the clans and tribes lived, and to what points their tribal bounds extended.

We have here the first stage, that is, the totem system, which consisted in the worship of animals. We have second, the sun worship, which prevailed extensively among the Mound-builders and the Pueblos of Central America. We have also the ancestor worship, which prevailed on the northwest coasts with about as much force as it does now in China. We have also the anthropomorphic system, which prevailed in Mexico and Central America with almost the force it prevailed in Egypt, Greece and Assyria.

All the systems are exhibited by the symbolism of America. We have also mysteries and magic arts, and secret societies which remind us of the east. The progress of the totem system into the magic arts was manifest in the new world as well as the old. The "magician" and the "medicine man" were

similar or had similar offices. The Eleusinian mysteries and the mysteries of the Priesthood of the Bow have many points of resemblance. Both came out of an elaborate system of sun worship, and both were expressive of the operations of nature.

We take sun worship everywhere as the keystone of an arch, the animal figures found in America to represent totems forming one side of the arch and animal figures in Egypt to represent attributes forming the other side. We learn a lesson from the comparison. In the first place it is probable that animal worship preceded sun worship in all parts of the world. Second, the progress of religion from a low stage to a high and still higher stage is manifest by this comparison. Animal worship, sun worship and the worship of idols bearing human names and having human attributes, were the different grades in the progress. Third, the personification of nature powers led to much of the symbolism of the civilized races, the sun being often represented as a person having personal attributes. Fourth, the question is as to monotheism. Here scholars divide. Some of them maintain that this is the latest product of a continuous series of advancing thought, while others maintain that the thought of God is latent in all minds and it is the earliest of all religions. Fifth, the point which we set out to illustrate is that totemism and animal worship were the sources of very much of the symbolism in the old world as well as in the new. We do not know as we have proved it, but the subject is certainly suggestive.

We begin in America, far back in the superstitions about animals, but we end in a very high stage of symbolism in which personal attributes are represented by the combined figures. A system almost equal to the heraldry of the East prevailed here.

The primitive heraldry and the introduction of magic are known in America. The totem system is nothing but a modified heraldry. Shamanism was the beginning of magic. These are anterior to sun worship and various degrees of religious culture intervene between them. Sun worship is the first stage apparent in Egypt; after that there is an anthropomorphic tendency. There is an esoteric significance to the gods in Egypt. Isis and Osiris and Horus present an esoteric system. They were different from Ra and Set and Neph, as different as the intellectual is from the physical. The story of Isis, Osiris and Horus is allegorical.

This cult prevailed in the palmy days of Egypt; still there was a progress in religion, even though there was a decline in power. The hieroglyphics, tablets and disks, which belong to a later stage of history, show that there was a progress; still animal forms and sun symbols were perpetuated in Egypt notwithstanding the changes that came over history. This is seen in the Hypocephali; an animal-headed divinity stands in the boat in which the soul is ferried over to the land of spirits;

the boat contains an ark which reminds us of the ark in Jerusalem. The boat or ark is always in the center of the sphere or disk. The soul is conveyed in the ark to the land of the setting sun. Here is a psychological idea, and yet the symbolism of the old mythology is perpetuated. We might speak of the survivals of the symbols of the old mythologic system. The form of the disk and its divisions and hemispheres are survivals from sun worship. The animal heads upon human forms in the divinities are survivals of animal worship.

Another illustration of progress and perpetuity may be found in the animal myths which prevail throughout the whole world. It is remarkable that the hare and the owl are everywhere regarded as mythologic creatures. Some make these animals to be symbolic of the various movements of the sun. We read in the proceedings of the Society of Biblical Archæology that "this was owing to the ambiguous use of the word hare." We doubt whether this is the case. The Egyptian word for hare may have several different significations: to "start up;" to "open;" to "transgress," "overleap," etc.; but what has the Egyptian word to do with American symbolism? The historic connection between different countries is not sufficient to account for the universality of this myth about the rabbit or the hare. It is only because this animal is everywhere found and is taken as either a tribal totem in all countries or because it fitly symbolizes or represents a nature power. The progress of thought may be recognized in the history of this single animal myth, for the hare itself has passed through all the stages from the simple totemism up to the psychological symbolism, and is the best instance of a "survival of the fittest" which we have on record.

If we take the seals and cylinders discovered at Babylonia by Dr. W. H. Ward and compare them with the Hypocephali discovered in Egypt recently we shall see the contrasts. Many of the seals and cylinders are very ancient, but the Hypocephali are comparatively recent; the first dating back as far as 2200 B. C.; the last having dates as recent as the twenty-sixth dynasty. The interpretations of the cylinders given by Dr. W. H. Ward and Prof. A. L. Frothingham in the *Journal of Archæology* and in *Scribner's Magazine*, as well as in *The Sunday School Times*, are very interesting. The interpretation of the Hypocephali are found in the "Proceedings of the Society of Biblical Archæology" for 1885 and 1886. As connecting links between these two extremes we have also the symbols and inscribed animal figures which have been found at Jerabis and at Sindjirli. These are supposed to be Hittite and stand between the Assyrian and Egyptian symbols. Two things are noticeable in all of these symbols, whether ancient or comparatively modern, viz.: the sun symbol is everywhere present, but it is attended by animal figures. This is the main point of our paper. Sun worship and animal worship appear at the very

introduction of history in a combined capacity, and the symbolism of both is prominent in the most ancient tokens. Sun worship and animal worship continued long after the early empires had run their race. History and mythology make a record of these, but not so complete a record as archæology does. We are discovering more about the symbolism of the east and finding that these two systems of worship were very powerful. There are several stages of progress which might be marked out, but we have not time to dwell upon them.

Some would argue from this that solar worship had a growth upon this continent and there is considerable plausibility to it, but we call attention to the resemblances in detail. The case of the Peruvians is cited as proof. They thought that there was not a beast or bird on the earth whose shape or image did not shine in the sky. They seem to transfer the animals to the sky and worshiped them there, making constellations of them which remind us of the constellations which originated in the east. They considered that the luminaries and the constellations were guardian divinities. The sons of the moon and the sons of the panther stood in a similar relation. This is significant.

They worshiped both beings and regarded them both as ancestors and put the symbols of both into one divinity. The signs of the Zodiac came in this way. The stars were combined into constellations which represented animals. In Asia animals were mere mythologic creatures, fabled monsters. And yet, it is probable that they were originally nature powers and possibly may have symbolized Totems. There are myths concerning the Pleiades in America, and we believe that other myths will be found which were derived from the old world, but we in America may learn how these myths and constellations and astronomical divinities arose.

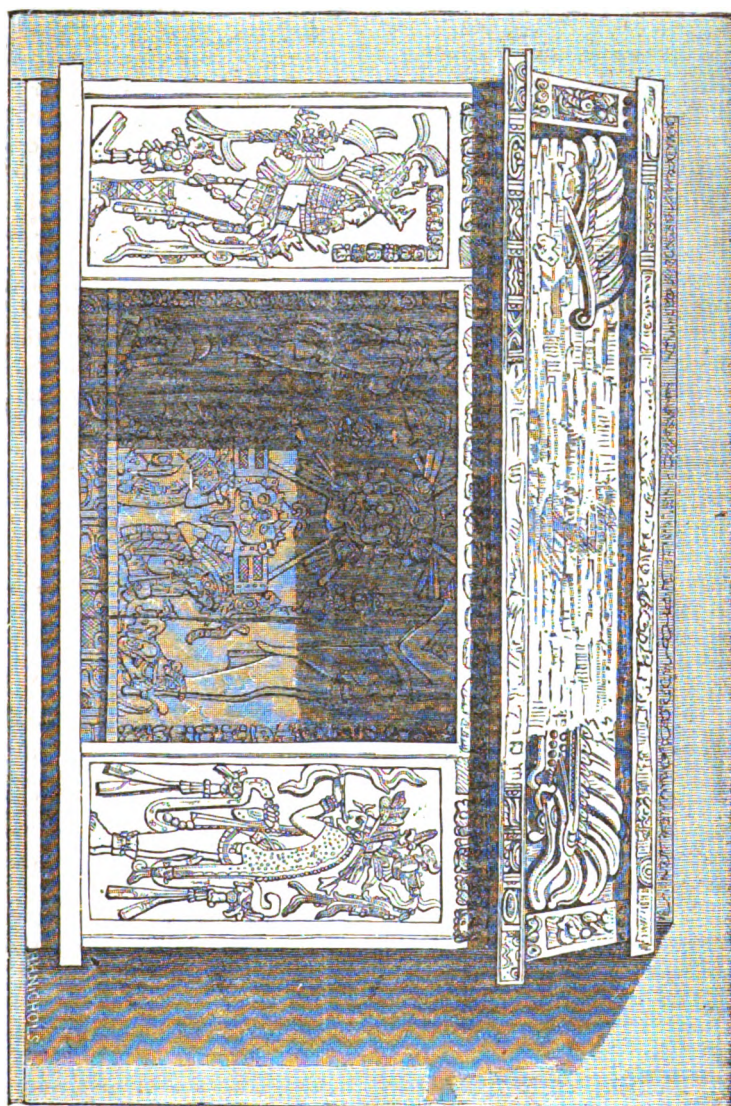
Here we have first the Totem system with animals as the symbols ; second, sun worship, with rude figures of the sun for symbols ; third, we have the combination of the two, animal figures and sun symbols being combined ; fourth, we have the nature powers introduced as an adjunct to sun worship, the nature powers being symbolized by animals ; fifth, we have the personification of the sun, the sun being symbolized by an idol in human shape, but the nature powers surrounding the human form symbolized in various ways. These views in reference to the growth of idolatry in America are not altogether speculative. We regard them as suggestive of the source of idolatry in all countries. The Totem system was the first source in all countries. The Totem system in America was generally limited to the hunter races, and did not go beyond the stage of savagery and barbarism. We would not expect to find the Totem system in historic countries. Still there are hints of it even there. Lenormant says that "the cherubim of the scriptures and the flaming sword in the garden of Eden were symbols derived

from prehistoric times. They are the remains of the primitive sun worship. There are those who ascribe the symbols which were placed on the escutcheons of the tribes of Israel to a primitive animal worship. The lion was the animal symbol for Judah, the ass for Issachar, the wolf for Benjamin, the serpent for Dan, the hind for Gad. Certain writers think that the word Elohim originally represented nature powers, and that the word Jehovah represented the personal god or national divinity. They would thus make the Jewish worship to originally have sprung from sun worship, being the result of the last stage of development. The idea of one God, however, appears in the very first chapter of Genesis, and it is probable that this was as early as sun worship.

The serpent is to be considered in this connection. Serpent worship and sun worship are everywhere associated. In America the serpent is a very common symbol, and a symbol very frequently connected with sun worship. The serpent was a sign of kingly power as well as a symbol of the sun. In Egypt the head of the serpent issues from the orb, which is worn upon the head of certain divinities. In Assyria the serpent forms a circle in which the king or the divinity seems to stand. The king has a crown upon his head, while he holds a small serpent circle in his hand. In some of these figures the wings of a bird issue from either side of the circle and the tail of the bird is below the circle. The caduceus, or emblem of Mercury was a double serpent twined around a staff. The caduceus with two wings at the head of the staff overshadowing the serpents was a symbol of royalty with the Romans. Thus we have the survival of the serpent symbol late in history.

The winged globe is another symbol which shows progress and perpetuity. The winged globe in Egypt was a symbol of the sun. The winged globe is found in America. In Egypt the winged orb was a symbol of the kingly office and was frequently placed over the head of the king. In Assyria the king was placed in the circle of the sun with a crown where the head of the bird should be, but below him is the spread fan-shaped tail of the bird. In America there is no king in the circle, but the bow is seen spread across the face of the circle just beneath the spread wings and so made significant of the warrior office. The golden egg is to be considered in connection with this symbol of the globe. Mr. Renouf says that "the golden egg has undergone considerable change, but in its earliest form the god of the golden egg is only a name for Savatri, the sun," and here the Hindoo and the Egyptian myths agree. We do not know whether the cosmogonic egg was ever introduced as a symbol into America. See Plate V.

We will refer next to the bird on a Proto-Ionic capital found in Mesopotamia. Prof. Frothingham says: "This bird is evi-



*Plate V. Adoratorio with Winged Globe.*

dently the symbol of the seated divinity. Toward these approach two worshipers, each with a hand raised in adoration. Behind them are two animals, a hare and a kangaroo (we should say ibex). The seated divinity in dress and type takes us back to the Babylonian cylinders of 2000 and 3000 B. C." Notice the dates ascribed to this cylinder and the figures upon it. Prof. Frothingham says "kangaroo." It looks to us more like a mountain goat or ibex. We have taken the position that some of the earliest inscriptions indicate that animal worship prevailed before the first ancestors migrated from their early home among the mountains of Thibet to the plains of Shinar; that they had a Totem system similar to that of the North American Indians before they migrated. The hare and the ibex on this cylinder seem to confirm our position. The bird reminds us of the thunder bird of the Thlinkits and of the Aztecs; but it may have been a mere sign of royalty. The question is whether the symbols on these early seals and cylinders had reached the stage where heraldry was adopted and understood. We think that the Totem system would account for them and yet they may be ascribed to a system of heraldry. There is another seal or cylinder in the De Clerq collection in which a bird with spread wings is represented as in the air three times repeated with the symbols of the sun and moon beneath, and seated divinities facing these symbols. Here we have heraldry, for the bird with the spread wings may have been the ensigns of power, and yet we have mythology, for the sun and moon are there, and evidently were objects of worship. Layard says that "sacred birds belong to the Babylonian and Assyrian religion and were connected with sun worship."

It would seem from these facts that there had been a progress from a primitive animal worship and sun worship to the various systems of heraldry and a formal religious symbolism in all countries. We may say that the Totem system was the beginning, or at least an early stage in the progress. Even the astrology of the old world may be traced back to the primitive animal worship.

V. We now turn to consider the correspondence between these symbols of the east and west, especially those found in Asiatic countries, and the American continent. This is an important point. How came America to have symbols so resembling those in the eastern hemisphere? They resemble them not only in generic lines but in specific points; the details of the symbols being as suggestive as the symbols themselves. In Asiatic countries this correspondence has been ascribed to an interchange of thought and intercourse between the nations. Is it possible that the same transmission of thought has extended as far as America, and shall we ascribe it to an intercourse between the two continents? We take up the point because it is an interesting and important one. The figures in which correspond-

ence are to be found are generally composite figures, but as we analyze the different parts we find remarkable resemblances.

1. We shall take up the symbol which represents the sun as a circle or disk or orb with wings issuing from it. This is called the solar orb, or the winged circle. This is a very significant figure. We call attention to the resemblances in detail of this figure. There is a striking resemblance between the American and the Egyptian symbol. The main difference is, that in America the feathers of the wings are turned upward, while in Egypt they are turned downward. In America there is a bow which extends across the face of the semi-circle. In Egypt there is no such bow, and yet in Egypt the moon is sometimes represented as a bow, and the myth is that the sun was shot from the bow.

There are two specimens of the winged circle in America. Both of them are imperfect, but the one supplements the other, and so we have the perfect figure. They were found by J. L. Stephens. They were both placed over the adoratorios, in which were tablets containing symbols of the sun, and were evidently intended to symbolize sun-worship. See Plate V. In Assyria there is a winged circle which has the crowned head of a king issuing from the circle. In America we have no such figure of the king, but we have the figure of the winged orb or circle, resembling that in Egypt, with this difference: that the feathers are turned up instead of down. This is seen from the fragment preserved on the corner of the adoratorio at Copan. In the other specimen discovered by Stephens there is a large circle in the center and a bow stretched across from one end of the wings to the other; there is no bow on the Egyptian or Assyrian symbol, but instead the crescent of the moon is seen. The conception is the same. The sun seems to have been shot out from the moon as from a bow. There is a bow and a bow-string stretched across the wings, but there is no bow in the Assyrian symbol. The history of the winged orb is not known, but the earliest and most primitive form of the figure of overshadowing wings is found in the northwest coast of America. We give a cut to illustrate it. It was probably a totem and yet was a thunder bird. See Fig. 4.

2. The sun symbol in nearly all countries is a disk or circle or globe. Disks are found in the mounds in America. These disks or shell gorgets are inscribed with figures of the sun in the shape of circles; symbols of the moon in the shape of crescents, and symbols of the stars in the shape of dots. There is nothing very remarkable about this. There are disks among the Pueblos in which the sun is represented as a human figure, crowned with a turreted helmet and with a many colored bow above the figure. These are acknowledged to be symbols.

There are disks in Egypt. Sometimes the disks are represented with faces, sometimes with arms issuing from them and with



hands at the ends of the arms. There are disks in Assyria and in India. In all these countries the sun is symbolized by the disk.

The winged orb is a modification of the disk. The overshadowing wings are found in Egypt, in Assyria, in India, and in America. In all these countries there is a circle or a globe with wings issuing from it, and generally some animal head is connected with the circle. In Egypt the asp issues from the circle. In Assyria the head of an eagle is seen above the circle and the tail below. In America the head and wings of an



*Fig. 7. Double Throne and Plutic Symbol.*

eagle are sometimes seen hovering over the circle as we have described above. Sometimes the circle has wings without any animal heads, as at Copan and at Palenque. The serpent is combined with the disk. In Assyria the solar orb or circle is formed by a serpent. The king holds a small serpent circle in his hand. In America the serpent also frequently forms the circle of the sun. We have referred to this already. It is seen in the calendar stones. The caduceus, or emblem of Mercury, was a double serpent twined around a staff and overshadowed by two wings at the head of the staff. There is no caduceus in America. The serpent in the shield of the Priesthood of the Bow reminds us of the Assyrian symbol, but it is in a different position and has no such significance.

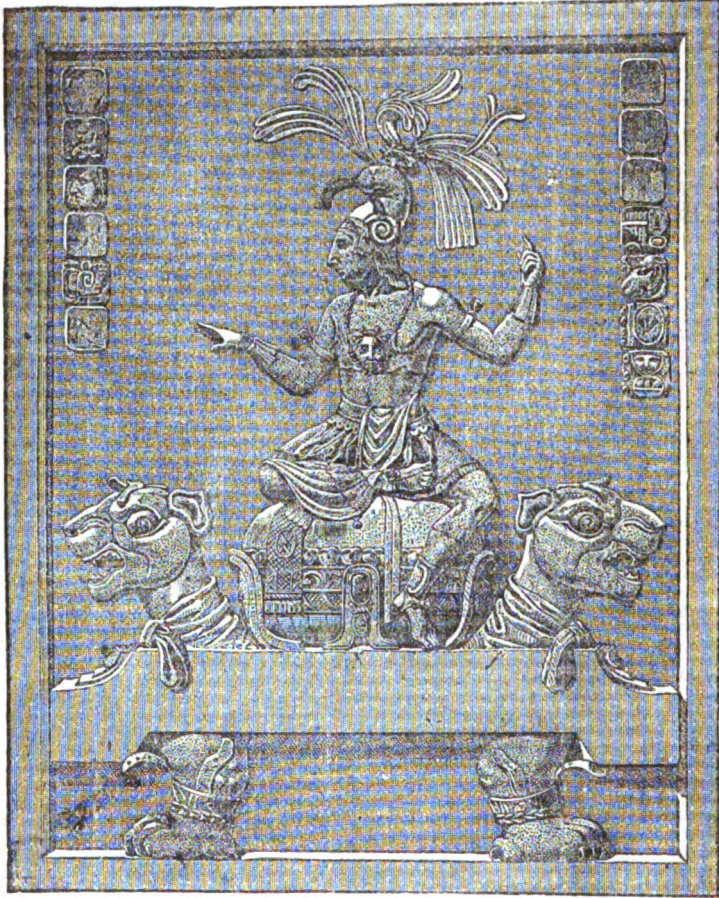
3. The animal headed throne is to be next considered. It will be noticed that the throne on which the globe rests is composed of a heavy beam supported by the clumsy legs of a tiger, while above the throne are two animal heads. These animals have pointed ears, large eyes, heavy jaws, and open mouths; and may either represent leopards, or tigers, or panthers it is uncertain which. Another throne like it, but without the sphere or globe



*Fig. 8. Idol from Mexico.*

was found by Stephens at Uxmal: see fig. 7. There was near this throne a stone pillar which reminds us of the Lingam which is so common in India. Stephens thought it was a phallic symbol. If so we should say it was introduced from Asia. We call attention to the history of the double headed throne as it has a history. The most primitive form is found in Egypt. Here the orb and the lion are both symbols of the sun. The orb is sometimes found resting on the back of two lions which are placed back to back with the face out. Another type is found in Egypt with the lions joined together, so as to make but one body with two heads, and the solar orb rests upon the body. Transmitted to India the symbol changes. It is here a globe representing the

cosmogonic egg and the throne, has tiger heads instead of lion heads for the arms. In India a female figure, the goddess Kali, appears on the globe. In America a male figure is upon the globe, and yet, Stephens found a globe on which a female figure sits corresponding to the figure just described, which is a male figure. In this tablet there is a figure of a king with a flattened



*Fig. 9. Double-Headed Throne.*

head, who offers a mask which he has taken off his own head and is presenting. See Fig. 8.

In America it is surmounted by a figure with Aztec features. We think that this figure shows the advent of a Brahman or a Buddhist priest in America. The drapery is American, but the attitude is Buddhistic. We think it can be traced back to Egypt. Here we find a rude symbol consisting of two lions sitting with their backs to one another and with the disk above them. Sometimes the lions were engraved upon an amulet and the amulet

attached to a ring; the ring being a substitute for a disk. This opinion as to the transmission of symbols may be contradicted by some. It is said that sun worship arose in America and advanced in parallel lines with the systems in Asia. See Fig. 9.

4. The globe is a symbol of the sun. There are globes in India and globes in America; and they resemble one another very remarkably. The globe in India probably represented the golden egg. Mr. Renouf says that "the symbol has undergone considerable change, but in its earliest form the god of the golden egg is only a name for Saratri, the sun, and here the Hindoo and Egyptian myths agree." We call attention to the globe as presented in figure 9. This is elaborately decorated with a finely woven sash hanging down the side. It is surmounted by a chief who sits with his one leg drawn up and the arms extended, an attitude which is generally ascribed to the goddess Kali in India, and one which was peculiar to the Buddhistic religion. The features and the drapery of the figure are American; but the attitude of the figure and the shape of the globe are Hindoo. There is a crested helmet on the head reminding us of the helmet of Mars; but above the helmet are the feathers which usually adorn the head dress of American chiefs. The goddess Kali has a necklace of skulls. This American god has a necklace of pearls and a medallion with a face in it to symbolize the sun. Here we have evidence of the transmission of thought from the Asiatic continent to the American.

---

## PERUVIAN CIVILIZATION.

South America supported an indigenous culture so closely related to those we have examined, or at least composed of such similar elements and developed to such a similar degree that any complete outline of North American civilization requires its description.

In the highlands of Peru, though spreading its beneficent influence through the coast regions and along the water courses that emptied upon them, the Spaniards upon their first arrival met an enlightened and industrious nation provided with an elaborate mechanism of government and advanced schemes for material prosperity and happiness. Milder in disposition than the Aztecs, the Incas of Peru embodied in the form of government they imposed upon their people the most despotic principles under which human society can exist. They chose for their central seat the elevated and interior regions and the valleys between the parallel chains of mountains of the western cordillera of South America, while the outskirts of their kingdom stretched beyond the divide of the majestic Andes, whose snows as they

melted, formed fertilizing and gentle streams, or else gathered their waters into deep basins, on whose borders their cities and fertile gardens mingled. Their authority reached over a wide extent of country, as diversified in its physical aspects as it was varied in its ethnology. Everywhere wide and enduring highways of stone, monuments themselves to the omnipotence of their control and the wisdom of their policy, seemed to rivet and hold together the separated areas and scattered colonies of their realm. Valleys blossoming with crowded grain-fields, and sand-swept plains, frowning pinnacles, yawning ravines, and populous towns in a varied mosaic of beauty and desolation formed the domain they owned and benefited.

The theory of their government was simple, its application more or less complex. In the veins of the Inca ran the blood of the Sun, their people's God, and their rule represented the vice-regency of the Divinity. Their power was hereditary, unlimited, and adored. Their office being alike paternal and divine, permitted a scrupulous supervision of the interests and a no less pertinacious inquiry into the occupations of their subjects. From this arose a remarkable code of laws and customs. Let us examine more closely the use and development of this singular dynasty.

The country they ruled offers a remarkable diversity of physical aspects. Along the Pacific stretches a rainless and desolate tract, relieved at points by the passage of some stream across it, but more often rendered more forbidding by the occurrence of a sandy and uninhabitable desert. It has an average elevation of 500 feet, and meets on its eastern border the steep slopes of a mountain barrier, up which the traveler is led by perilous and tortuous paths to the elevated table-lands that lie below the lofty and snow-crowned crests of the first Andes. These glittering pinnacles passed, the eye encounters the interior plateau, which, at a greater elevation, spreads north and south, east and west between the three parallel and for the most part symmetrical ranges, which define and cross it. This plateau, lying at a height of from 11,000 to 14,000 feet above the sea level, is for the most part a cold and forbidding plain, swept by freezing winds blown from the icy Sierras and supporting a miserable and stingy pasturage for the llama and alpaca, upon which flocks of these useful creatures browse. Amidst this monotonous waste, sunk like gems in the blank landscape and protected by encircling hills lie the temperate *bolsones*, the fertile valleys which the Incas occupied. Again in yet stronger contrast to everything else one meets deep *barancas*, "tropical mountain gorges, where the thousand head streams of the Amazon collect their waters before forcing their way over roaring cataracts and through the dark clefts of the Andes down to the plains of Brazil." Beyond the eastern wall—another phalanx of silent and whitened moun-

tain tops—lies a table-land burdened with a tropical luxuriance of graceful and perfumed vegetation. Here the palm, the bamboo, the cocoa tree, the sugar cane and the medicinal cinchona grow together, along the borders of rapid streams, whose united flows form the head waters of the Amazon, the whole a presage of that still greater luxuriance of nature buried beneath the vivid surface of a still and deathly wilderness on the lowlands of Brazil. Even here, if we may believe report, the outposts of Peruvian civilization were planted and were needed to resist the occasional inroads of the wild denizens of the Amazon. Taking the central point of the Inca kingdom, as at Cuzco, in latitude  $14^{\circ}$  south, its extent northward reached to Quito, southward to Atacama and beyond, westward to the seaboard, eastward to the descent upon the Brazilian plains, though these borderlands underwent an uncertain oscillation to and fro, with a general tendency to enlarge, as wars or natural convulsions brought conquest or disaster. The initial point whence started the Peruvian cultus is fixed, by tradition, at Lake Titicaca, an expanse of water as large as Lake Ontario and at a height of 12,196 feet above the sea.

Here Manco Capac and Mama Bello Huaco, children of the sun, obedient to the divine command to begin their missionary labors on the spot where a golden wedge, which they carried with them, should sink into the earth, taught their civilizing maxims and prudent industries to the wild people about them. Other legends, as the advent of white men upon these shores, would attribute to a different source their peculiar knowledge, but at any rate to Lake Titicaca, as in some way connected with the primal impulse which originated their nation the local lore and hearsay all point. Great ruins now exist on the rocky shores of this lake and the Peruvians regard them as the works of a people more ancient still than themselves.

In whatever way begun, the separated tribes who inhabited bordering provinces and isolated strips of useful land, assumed a new organization and associated under hereditary rulers spread their power and influence over new and numerous tribes. The germinant principle of civilization had acquired a foothold on these Alpine steppes and amidst a receptive and mild-tempered people it spread with certainty, if not with the vigor and rapidity we might expect; a nation emerged from precarious bands of warring savages and animated by zeal for its religion, and ambition for conquest, it commenced a series of military excursions which brought it to that height of temporal dignity which it exhibited on the arrival of the Spaniards. A royal family, a line of hereditary monarchs, a regulated aristocracy, a prolific priesthood, a system of civil service, special branches of industries, wealthy cities, (an equipped if not a formidable army) and public works of colossal extent and of commensurate value. Here were



all the features, in name, at least, of a broad civilization, and if the picture in detail was not as exciting and grotesque as that we have contemplated in Mexico it was more attractive.

The royal family was composed of the reigning monarch, his wives and children. He was a direct descendant of the sun, and his successor was chosen from those children born to him by his own sisters. By such a provision the divine succession was to be indefinitely maintained. Sumptuous houses stored with gold and silver ornaments, and lined with rich and variegated fabrics woven from the hair of the vicuna and scattered over his kingdom where he rested on his visits to parts of his realm. The Inca king was distinguished by the beauty of his raiment and the colored *llautu* which with a scarlet fringe encircled his head. He was revered with a blind idolatry by his people and the auspices of divinity were thought to accompany even his presence amongst them. His authority was absolute, untempered by even an appearance of constitutional checks, and his body after his death became an object of regard, and a posthumous glory rested on the spots he had visited or lived in. His houses with their treasures were left untouched, and in one chosen from all the semblance of his occupancy was kept up, while his body, embalmed and placed in the solemn company of his predecessors in the Temple of the Sun at Cuzco, became an object of adoration. The nobility were composed of the numerous progeny of the Incas, and of the heads of subjugated provinces. They monopolized all the places of honor or value in the kingdom, resided near the king and formed a powerful class interested in the continuance of his power. The priesthood were an important order, not so omnipotent as in Mexico, but assigned to the conduct of the ritual and services performed in the temples in the worship of the sun. A great high priest presided over this class. The religion of the state was the worship of the sun, and all that a semi-barbaric opulence could display was crowded into his great temples. The festivals of such a religion were naturally derived from the phases of the great orb's passage through the skies, the solstice and equinox. The summer and solstice were occasions of great solemnity, and a general cessation of work ensued upon their commencement, while the Inca king himself performed the most sacred rites within the inner recesses of the temple. The wealth of the temples of the sun, of which there were some 400, in gold and silver seem beyond belief, for as report says their walls were plated with these precious metals, and in the great temple at Cuzco the display was even more remarkable. Besides the sun, the moon, the stars, the rain, thunder and lightning, and the great hosts of nondescript deities, with which a savage people filled up their mythology, and which in part represented religions assimilated from neighboring and conquered provinces, were embraced in the objects of their worship. Their

sacrifices were for the most part innocent, the fruits of the earth and the bodies of the llama. Human sacrifices took place, but under very restricted and exceptional circumstances. One other god was a singular abstraction. He represented the single, pure, omnipotent power, to whom no altars were raised, who had one temple, but who ruled over the entire universe, too subtle an idea for the Peruvians to even express clearly, and probably one they did not rightly value. It would seem the inheritance of some precedent civilization.

In connection with their sun worship, as a part of their religious machinery were convents of nuns or virgins of the sun, the fairest daughters of the Inca nobility, whose vocations were various, as weaving, decorating, etc., but whose important task was keeping alive the sacred fire which burnt in all the temples of the sun, and whose extinction was regarded as a public calamity. These convents were under the vigilant control of aged matrons, and the indiscreet maiden who ventured to encourage a secret suitor paid the penalty of a fearful death. She was buried alive. Yet from these nurseries of women were selected the most beautiful wives of the Incas.

The paternal system of government instituted by the Incas was of a most painstaking, minute and irksome character. The whole kingdom was divided into four parts, over each of which a governor was placed by the Inca, and under him was a line of offices and office-holders, each consecutively having jurisdiction over smaller and smaller groups until in its lowest members we find a master governing a group of ten persons. These units formed bodies of one hundred, these latter bodies of 500 and 1,000, and these again departments of 10,000 inhabitants. Delinquents and offenders were thus instantly secured, and such crimes as they considered penal checked almost before they were committed. Each subordinate was compelled, under the penalty of death, to report the crimes of their people, and none escaped. The tribunals of justice were limited to five days to decide a case before them, and as there was no appeal, justice must have been as expeditious as it was certain. The offences which principally figured in these courts were theft, murder, adultery, blasphemy against the Sun or Inca, turning off water courses, and the destruction of bridges. The revenues of the empire were derived from the great estates of the Inca, comprising one-third of the whole kingdom, which the whole population cultivated, at certain times celebrating this honorable occupation with songs and dancing. The rich mines of the kingdom were the sole property of the Incas, and the vast flocks of llama and vicuna, which pastured on the uplands and wandered in unmolested herds over these elevated plateaux were also almost exclusively his excepting such a number as were needed for the use of the people. These quota were carefully allotted to each family



throughout the country by the appointed wardens from the great store houses wherein the various riches of the king were hoarded. Another large portion of the kingdom belonged to the Sun, and its yield supported the priests and defrayed the usual expenses of a costly ritual. Amongst the people was then divided the remainder of the land, and to every family according to the number of souls composing it, more or less land was assigned. All were expected to marry at a certain age, in men at 25 years. At regular intervals the requisite number of unions were prepared, quite irrespective, we may believe, of private choice, and the whole company married at once by the performance of some mingled official and sacred functions by the Inca.

The land amongst the people constantly underwent re-distributions as the various communities decreased or increased, and we can conclude that the latter tendency prevailed. The duties of individuals seem to have been carefully assigned; the best workers in gold and silver and skillful weavers of fabrics were soon known and their talents dedicated to the service of the Inca. The government observed everything, and its cautious and discerning rapacity seized whatever helped its enjoyment or strengthened its power. Yet this absolute suppression of any appearance of liberty was accompanied by a judicious regard for the general welfare of the people, and if the poor never rose higher they were as certainly prevented from sinking lower.

The army of the Incas was a carefully kept and disciplined force and involved the entrance of the whole population by successive portions into the military service. The army was brought under the same minute regulations that prevailed in the Inca government everywhere. A series of officers rising by regular graduation from the soldier to the general constituted its commandery and corresponded to as many subdivisions of the force. War occupied the attention of the Incas and they pushed further and further the borders of their empire.

A new country subjugated, the methods used to fuse its people completely with their own and consolidate both strike one as the most remarkable feature of their polity. The heads and rulers, with their families, of the new provinces were taken to the Inca capital and there indulged in its pleasures, the court language—the Quichua—was substituted in the new country in place of the old, and finally a portion of the inhabitants transported to a distant region, though one in which their original habits suffered no violent change while their place was supplied by a section of the older subjects of the Inca. Their original rulers were continued in power and even their religion met with a deferential treatment. In such wise ways the Inca finally succeeded in amalgamating his diverse peoples into a contented and solid unit. At the same time their policy was not marred by any timidity and the distinctive features of their own government

and religion were impressed upon the country and vigorously confirmed. Despite this apparent evidence of an elaborate military machinery, modes of warfare were doubtless crude, and the easy prey they made for the Spaniards, though partly explained by a superstitious awe and confidence in the promises of these skillful intriguers is but a poor testimony to either their skill or sense. Spears and arrows of copper and bone, and stone hammers, slings and axes formed their weapons and cotton vests their armor.

The greatest achievements of the Incas, those which entitle them to honorable mention amongst the civilizers of the world, and whose remains to-day offer some corroboration of accounts of their civilization, which in other matters, beyond the limits of examination, seem too often imbued with a love for a fanciful excess of wonders, were their great roads and aqueducts. From Cuzco to the north as far as Quito a strong, wide thoroughfare laid in blocks of stone and an enduring cement extended, while to the south as far as Chili its continuation afforded an equally firm and unbroken highway for the passage of companies, flocks and goods. This road passed over the table lands, high and snowy, where frost wrought its destructive work upon their structure. The people were drafted to repair injuries on the roads, and it was a criminal offense to destroy or impair them.

As remarkable and perhaps more beneficent was their system of aqueducts by which water was conveyed to the high lands and low lands or wherever needed. This wise provision permitted a widely extended irrigation, and the success of the yearly crops, indispensable for the nation's peace and prosperity, were thus in a manner rendered independent of the precarious rainfalls. These aqueducts were watched with the same vigilance which they used in protecting their great roads, and the culprit who injured them met with scant mercy.

Such were the principal features of the Inca Empire, and whether we regard it as an instance of indigenous culture or as an engrafted civilization upon aboriginal barbarism, it challenges equally our admiration and astonishment. It possessed more unity than the Aztec, was marked by a more gentle temperament, accepted a more refined religion, yet it seems doubtful if it included germinant principles of development which would have led it further in the path of progress. The vigorous ferocity of the Aztec and their confused union of different elements would have prompted original plans for amelioration of the one or consolidation of the other, and this in turn have been the fruitful source of numerous improvements in art or science. But the apparently serene pinnacle of power which throned the Inca, and the contented subserviency of his people offered no provocations for change, and for once the pretensions of royalty united to popular servility to preserve all unaltered the relations of king and subject.

## EPITOME OF PREHISTORIC ARCHÆOLOGY IN WEST-ERN EUROPE.

### THIRD PAPER.

#### SPAIN AND PORTUGAL.

The Iberian peninsula is, by reason of its situation, of peculiar interest to our study of the prehistoric. It is the opinion of eminent professors who have given the subject most careful attention, that, during the tertiary or possibly quaternary geologic periods, the land of the straits of Gibraltar was above the sea level and that there was a dry land passage between the two continents. This would explain (if it be true) the presence and contemporaneity with the man of the paleolithic age, of torrid zone animals found in such numbers in the caverns of southern and interior France.

In the later prehistoric times, in the ages of bronze and iron, when the hordes poured from over the Rhine, coming, in more or less remote times; from Central Asia, the cradle of the human species, they came in successive waves of immigration, each pushing its predecessor and crowding them down into the pocket of this peninsula, until we find here the greatest number of prehistoric people, and curiously enough, their races preserved in their insularity and with great purity. Tertiary man here made and used his utensils, and they have been found; also Quaternary man in all his epochs, the neolithic age, also the bronze and iron, and so on down to the dawn of history, when we find with plain lines of demarcation, the Iberians of Caesar's time, the Basques of to-day, the Celts who, passing on, became the Celtiberians, and they in turn pushed from the north and east by the Gauls, the Belgæ, the Goths. This Iberian peninsula was the pocket which received them all, crushed together as they were by the momentum of the invasion behind, until they resemble the wavy geologic strata so often seen in the side of the mountain or sand and gravel in a deep cut in the alluvium.

To the classic historians the straits of Gibraltar were known as the columns of Hercules. The adventurous sailors of Tyre, of Sidon, of Sicily, of Carthage, the Phœnicians and Greeks passed out these columns of Hercules into the unknown sea beyond.

They held commercial relations with the Cassiterides, the location of which has been much discussed. The classic scholar

of the first half of the XIX century had no doubt of their coincidence with Sicily islands, or Lizard point. But later students believe them to have been the northwest coasts of Spain and Portugal.

The issue sought to be made in this discussion, so far as it relates to the commerce in the metals of copper and tin and so bears upon the burning question, from whence came the bronze of the epoch which bears its name, is really a false one, for the age of bronze lies far behind these histories, these voyagers, this commerce. Egypt, Tyre, Sidon, Carthage, Greece, and even Etruria, the forerunner of Roman occupation and civilization, had long before this time or these voyages, passed beyond the age of bronze and developed into the age of iron.

There is evidence of early working of the mines of Spain and Portugal, both copper and tin. But such evidence is quite insufficient to prove them to have been worked contemporaneously, or that their products were fused and made into bronze and as such used in the bronze age.

These evidences may be summarized thus: The copper mines are exhausted; among the *scoria* have been found grooved stone hammers of diorite, bearing marks of use; and it has been suggested that these were used in the working of the mines, breaking the mineral, etc., and that their substance indicates an antiquity belonging to the age of polished stone. I do not agree to the conclusion. The argument is inconsistent with itself. If these hammers were used in breaking the copper mineral, it must have been some time during or after the discovery of the mineral, which would take it out of the age of stone and into that of copper or bronze. The use of hammers of stone for such purpose is no proof of antiquity, any more than is the same hammer in the face of the modern stamp mill.

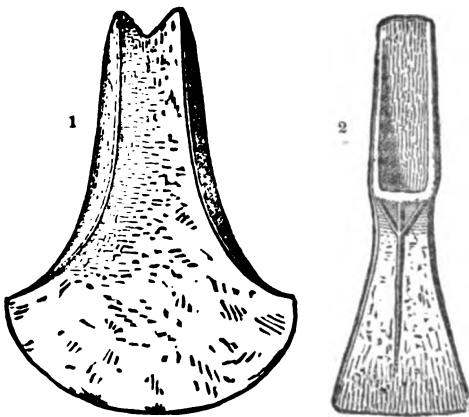
#### WAS THERE A COPPER AGE?

The working of the copper mines in antiquity is sought to be shown by declaring the existence of an age of copper. And to prove this its believers, Dr. Gross, Dr. Oliviera, etc., exhibit the instruments made of copper, instead of bronze—instruments in every way similar except in the small per cent of tin needed to make the copper into bronze.

The argument does not satisfy me. That the instruments made of copper have been found is true. But that does not prove to my mind the existence of an age of copper. The instruments of copper are found in insignificant numbers compared with those of bronze, yet they are quite or nearly as widespread as are those of bronze, in Spain, Portugal, in the dolmens of Southern France; Dr. Gross' collection, lately sold to the Swiss government and now exposed at Berne, had several. I saw a half a dozen at Bologna. The lake dwellings of Mondsee, Aus-

tria, furnished twenty-five examples, while they are not unknown in Great Britain and the Scandinavian countries.

An age of copper which could have diffused itself and scattered its implements over so extensive a territory, with such primitive communication and transportation as then of necessity existed, must have endured for a long period, and would require instruments in much greater number than at present appears. An age of copper extending over such vast territory with such few instruments, must spread itself out very thin, too thin for one to believe. Again, the instruments are of the same form as those of bronze, but always of the early age, the flat Celt; are found in the same kinds of tombs in the same countries, and generally under the same conditions, the almost sole difference being the slight one of ten per cent of tin being added to the copper to make the bronze, that I prefer to believe them to have been the differences of workmen and workshops, of circumstances, of



Figs. 1 and 2.

hazard, or possibly of trial, and so, mere variations of the age of bronze which we know so well, which became so widespread and which endured for so long time, rather than attempt to erect out of the comparatively insignificant numbers a new civilization and a new age for the prehistoric man.

Again, the copper must have been forged and not cast. To do

this would require a smooth-faced hammer and anvil, as is required by a blacksmith when he forges a horse-shoe. I do not stop to explain this, but I know of what I speak by the test of frequent experiments made in my youth. Two rough, flat stones will not do. Now, these hammers and anvils must have been larger, stonger, harder, more enduring than the metal worked by and upon them, yet none of these hammers or anvils have ever been found (and reported), not even in the workshops themselves.

Bronze foundries existed in the Iberian peninsula. The hatchets have been found in nearly all stages of completeness—some new, some with flaws, some with the *button* of metal made by the pouring still attached. The moulds have also been found.

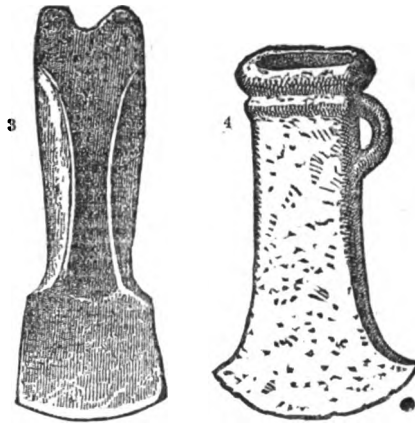
Something to be remarked, and as yet unexplained, is that of the four kinds of bronze hatchets, the (1) flat, (2) a *talon*, (3)

winged and (4) socketed. No. 3 is not found in the Iberian peninsula, while the others are. In Scandinavia, on the contrary, it is No. 2 which is missing, with the others in profusion.

Anthropology, though not receiving in Spain and Portugal so much public or special interest as in some other countries of Europe, is not by any means dormant. It has many votaries, who have lived and wrought to much purpose in their countries.

I have mentioned the discovery there of the evidences of the man of the tertiary period, at Otta, near Lisbon. The last session of the Anthropologic International Congress was held at Lisbon, in 1880, where the tertiary man was studied and discussed at length. There are many museums. The governments render the aid and protection in the purchase and care of the implements and monuments of the prehistoric man, and the peasant, with the savant, seems alive to the necessities of the situation, if they would have a history of their ancestry. M. E. Cartailhac,

of Toulouse, the editor of the "*Matériau pour l'histoire Primitive et Naturelle de l'Homme*," was charged by his government with a scientific mission in 1880-1. He visited a large portion of both countries, especially Portugal. He has just published his report in a volume of 350 pages, with a preface of 31 pages by M. Quatrefages, published by Reinwald, 15 rue Saint Peres, Paris. MM. Henri and Louis Siret, Belgian civil engineers, have but just returned from a long visit, and their report is now in course of publication; price \$50.00; apply to these gentlemen, Rue St. Joseph, 11, Antwerp.



*Figs. 3 and 4.*

Their report is so interesting and the prehistoric of the Iberian peninsula is so little known that I may be excused if I give a summary of their work. Their searches and examinations were in the two provinces of Murcie and Almerie on the southeastern coast of Spain, and extended from Carthagenas southward along the coast forty-five or fifty miles and into the interior twenty or more miles. They found and opened thirty prehistoric stations. Some were of the polished stone age, but the greater number belonged to the age of bronze.

They give a list of the objects found, from which the prehistoric situation may be understood:

400 knives of flint; 150 arrowheads of flint; 500 saws and

flakes of flint; 80 hatchets, polished stone, diorite; 200 sharpening or rubbing stones; 300 divers, hammers, moulds, etc.; 900 points and tools of bone and ivory; 70 hatchets, flat—in copper; 250 knives and poignards—copper and bronze; 4 swords—bronze; 30 arrowheads—copper; 4,000 beads—stone, bone, ivory, shell, copper, bronze and gold; 350 points—copper, bronze and silver; 700 bracelets, rings and earrings—bronze and copper; 250 bracelets, rings and earrings—in silver; 8 bracelets, rings and earrings—in gold; 7 diadems—in silver; 1,300 pieces of pottery—one-half of them whole; 500 shells, perforated; bones of many different animals; great quantity of cereals, charred, many human bones, with 80 skulls in good condition.

They found some stations which had the appearance of fortified cities. Like the Etruscan cities and many others along the Ligurian coast, they were placed on commanding eminences, places naturally strong, to which added strength had been made by the hand of man. I counted forty-seven such camps or stations, most of which I visited and excavated in the Alps Maritimes. The added fortifications were at the weak places and were sometimes embankments of earth, but more times of stone laid up as a wall without mortar. Inside these walls was the town, and here were found the houses with the furniture, provisions, millstones, etc. Of course these were all ruins. The roofs had fallen in and the walls out, but excavations brought to light their contents. Many things were found, safely stowed away in the large urns of pottery. Saws were made of flint, they seeming to be in more common use.

Burials were made many times within the walls of the town. They were sometimes by inhumation and sometimes by incineration, the former seeming the earliest and succeeded but not displaced by the latter. Sometimes the bodies would be drawn together, knees and hands to the chin, and placed within the grand urns as for coffins and then buried. Other times they were disposed in small cists made of stones. In one station they found 900 bodies.

Burials were frequently made of two bodies together, male and female. The debris of linen cloth was found, preserved by the bronze which lay against it, thus showing the corpses were dressed for the grave. Proof is also given of the preparation for the grave, by the arms and ornaments with which the bodies were adorned. For a man, a celt bronze or copper, and a poignard—for a woman a knife and a stylet or *poinçon*. They found strings of beads around the neck, rings on the fingers, bracelets on the arms, and ear rings in place. They found two skulls (of women) with their silver diadems still in place. They conclude from the appearance of the graves, and the nature and richness of the ornaments, that the social distinctions were kept up in death as well as in life; and ask what was this society, how was its supremacy

maintained? Was it a monarchy—a tribe with a chieftain or a hierarchy?

#### BELGIUM AND ITALY.

Belgium is entitled to a front rank among European nations in anthropological pursuits. D. Schmerling was a pioneer. He excavated and examined the caverns on the Meuse in the neighborhood of Namur and Leige as early as the year 1829. He discovered the celebrated Ehgis skull, and declared the contemporaneity of the human race with the fossil fauna of the quaternary period. Although his facts were not disputed yet the disbelief of Cuvier, the then highest authority, prevented or at least postponed their being pushed to their legitimate conclusion. The labors and discoveries by M. Dupont in 1864 and years following, placed Belgium on a firm footing so far as concerned prehistoric anthropology. M. Dupont gave the names mammoth and reindeer to the cavern epoch. The discovery last year, 1886, of the Grotto de Spy gives added interest. The flint quarry of Spienns, near Mons, rival those of Grand Presigny, and were much used in neolithic times.

Italy possesses peculiar attractions for the student of anthropology. Rome is the headquarters of classic archæology, having, in my opinion, even greater advantages than Athens. One has there the benefit of the aggregated studies of eminent professors who have spent their lives delving into the past, the many excavations extending over the entire country in a systematic manner under governmental superintendence, and the conservation of the objects found in the grand museums of the land, the fine libraries and the general atmosphere of archæology, afford a great stimulus to the student.

The German government established in 1825 an institute of archæology with a corps of competent workers and professors, which is still maintained and is now installed on the Tarpean hill in a government building as large as that occupied by the bureau of agriculture at Washington.

The history of Rome dates back further than any other country in Western Europe. In fact she started their history by first conquering their country. But Italy has had a greater number of prehistoric peoples than any other. It was once a favorite occupation of the very learned and highly theoretical professors to divine the origin of what they supposed to be the first occupants of Italy—Etruscans, Umbrians, Sabines, etc. The discovery, through prehistoric anthropology, that these peoples, instead of being the original occupants, represented the third or fourth, if not the fifth or sixth, civilization from the original, had the effect of transposing the interest to another and earlier epoch and people. The existence in Italy of man in the earlier paleolithic age has been denied by some high authorities and even yet is not entirely conceded by all. I do not stop to



discuss it. It is sufficient to say that the same argument and authority would deny the existence of the same man in France or England. Signor Guiseppe Belucci, of Perugia, has discovered the same drift implements (the Chelléen) in Italy and especially in his own province of Umbria, (to the number of 95), as demonstrates the existence of the man of that age in other parts of Europe. The same implements mean the same man, and so this discovery should decide the question in the affirmative. Evidences of prehistoric man in Italy are exhibited not only through the paleolithic, neolithic and bronze ages, as in other countries, but they continue into the age of iron for a long period of time before the commencement of Roman or Italian history. The *terremare* in the valleys of northern Italy are a peculiar and unique example of prehistoric civilization belonging first to the age of polished stone and probably continuing into the ages of bronze and iron.

The Etruscans in central Italy are nearly if not quite prehistoric. The dribblets of tradition which have sifted down through Roman historians are scarcely to be dignified by the name of history. We know of actual truth from history so little else concerning them than their mere existence, that they may well be classed as prehistoric. I should like an opportunity to elucidate this idea in the light of recent archæologic discoveries.

The foregoing remarks apply to the pre-Roman peoples of middle and southern Italy—they who built the so-called Pelasgic and Cyclopean walls—possibly, also to those others who built in Magna Grecia and Sicily those wonderful temples and amphitheatres which now excite the enthusiasm and reverence of the visitor as he stands with mute tongue and bowed head in presence of these stupendous ruins. The prehistoric civilization of Italy—manifested in its art work of implements, decorations and statues, in gold, silver, bronze, marble and *terra cotta*, in its sarcophagi, tombs and temples—fill the student with awe and reverence for the artists, architects and artisans who were their authors. In the foregoing I have sought to confine myself to prehistoric and to omit classic archæology.

Washington, D. C.

THOMAS WILSON.

## THE RAVEN IN THE MYTHOLOGY OF NORTHWEST AMERICA.

In order to correct many mistakes into which writers on this subject now-a-days have fallen, and through the medium of your journal, to save many valuable traditions of our aborigines, which are being rapidly forgotten by the rising generation, concerning the functions of the raven, believed in and handed down from time immemorial by the forefathers of these people, I write this paper. Most of the nations and tribes living between  $45^{\circ}$  and  $58^{\circ}$  north latitude, and between  $122^{\circ}$  and  $136^{\circ}$  west longitude, have the same traditions, with local variations, concerning the raven. These nations and tribes are, to begin with, those calling themselves Whull-e-mooch (dwellers on Whull, Puget Sound, Washington Territory), with their various tribes on the southeast coast of Vancouver Island and on the west coast of Washington Territory and British Columbia; the Qua-ghils (Quuckolls), with their various tribes on northwestern Vancouver Island and on the west coast and islands of British Columbia; the Simsheuns (Chymsheuns), with their tribes in northwestern British Columbia; the Klinquets (Thlinkets) of southern Alaska; the Haidas of Queen Charlottes and adjacent islands in British Columbia and southern Alaska. While writing these names I have, in the first place, spelled them as I always pronounce them while conversing with these people and give the best of the spelling adopted by other writers.

The raven of these traditions, and of this coast, is the common American raven, called by some ornithologists *corvus cutototl*. By the natives he is named according to their various languages: By the Whulle-e-mooch, he is known by the name of Spaul; amongst the Qua-ghils he is known by the name of Coo-e-up; amongst the Klingquets he is known as Yale or Yehl, or, as some foolishly spell it, Yethel; amongst the Haidas he is known as Choo-e-up and Yale.

Formerly they used to frequent the Indian villages in large numbers, where they fed unmolested on the offal and other garbage; lately very few are seen, unless near the villages far from civilization, where they are still plentiful. Their nests are generally found on tall fir trees.

What I have here given is an account, I may say, of the common every day life and habits of the raven, as it is known to most people, but there is one thing in connection with them not generally thought of or known to most people, that his race has

been deified. Ask any of the old Indians "who made the world and all things therein?" and the answer will be "the raven;" leading one to imagine him (the forefather of all the ravens) to have been a personal deity, the creator of the universe and every thing therein. That is not so, and yet in a certain sense it is, because, according to these people, the supreme Being in all his works of creation and providence assumed the form of a raven, whence came the idea amongst all those tribes to designate that Being as the raven. Yet, behind that name was another, signifying the All-Wise, Powerful, the All-Creative and the Eternal. This name is still retained by the Haida tribes, and may be by some others; although in all my dealings with them I have never heard it mentioned. That name is Ne-kilst-luss, and he it was who always assumed the form of a raven. With these introductory remarks I shall now proceed to give the ideas of these people. In the first place treating of the beginning of all things, copying as I go along from the various nations and tribes, but giving everything after careful study and research.

In the beginning a boundless darkness filled all space. On this darkness Ne-kilst-luss, in form of a raven, brooded from all eternity, having no solid place to stand on, his wings ever moving over the vast abyss, after æons, of ages beat down the darkness into solid ground, which was cold and damp, and afterward surrounded with mist, and at length covered with water. In order to have dry land, Ne-kilst-luss, or as I shall afterwards call him, following the aboriginal plan, the Raven, took all the water and put it into one place, forming the sea. As yet there was no sun, moon or stars to gladden the new formed earth.

In order to make something of the newly formed earth, he, the Raven, must have these luminaries set in the heavens, but before that could be done, he must have possession of them, they being owned by parties who closely guarded them and never could be induced to part with any, it being his intention to have the earth inhabited, which could not be done without light and heat. That being the case, the end justified the means taken to obtain them; whether by fair means or foul.

Every nation, and even single tribes, have different personages who were possessors of these luminaries. The Haidas have a great chief deity or being who had everything in nature; his name was Settin-ki-jash. The Cowichians and others of the Whull-e-mooch tribes say that Queenah (a sort of duck, called by the Haidas, Any-any-any-ah, from its cry,) had the sun, moon and stars in his possession.

Settin-ki-jash, mentioned above, seems to have lived where the Noeves river now is; from him in vain the Raven tried to get the heavenly bodies by fair means, so he resorted to fraud. He pretended that he also had light, and continued to assert it, though Settin-ki-jash denied the truth of his statement; he, however, in

some way made an object bearing a resemblance to the moon, which he allowed to be partly seen from under his wings. It cast a faint glimmer across the waters, which the chief thought was caused by a true moon. Disgusted at finding that he was not the only possessor of light, and losing all conceit of his property, the great chief immediately placed the heavenly orbs where they are now seen. With regard to the Cowichian tradition, it runs thus: When Spaul (the Raven) made the earth he wanted to set the sun, moon and stars in the firmament, but was unable to do so because Queenah had them all in three big boxes. In order to obtain them, he did all he could, but Queenah would not part with them. So anxious was he to retain his treasures that wherever he went he took them with him in his canoe. If he went a-fishing he opened the box which held the sun, and let out his rays, in order that he might have light to fish in. One day he went out a-fishing and took the raven with him, who, seeing his opportunity to acquire the long-desired boxes, threw Queenah overboard and held him under water until drowned. Having thus become master of the position, he opened the box which held the sun, who brightly and clearly took his place in the heavens, driving away the primeval gloom. Afterwards he let out the moon and stars, which took their places beyond the sun. The Klin-quets (Thlinkeets) say that a certain old chief had all the light stowed away in three boxes, which he guarded closely. Yehl set his wits to work to secure the boxes; he determined to be born into the chief's family. The old fellow had one daughter upon whom he doted, and Yehl changing himself into a blade of grass, got into the girl's drinking dish and was swallowed by her. In due time she gave birth to a son, who was Yehl. The old chief soon got to love his grandson as much as he loved his daughter, so that he soon became a spoiled child.

After awhile he raised such a row in the family, kicking and screaming for one of the boxes that the indulgent old grandfather gave him one, which stopped his crying, and with it he crawled outside to play. Playing, he contrived to get the lid off, when lo! the beautiful heaven was thick with stars and the box empty. The old man was sorrowful for the loss of his stars, yet he did not scold his grandson—he loved him too blindly for that. The raven thus succeeded in getting the stars into the firmament, and he proceeded to repeat his successful trick, to do the like for the sun and moon. He gained his point, although, as may be imagined, the difficulty was much increased. He first let out the moon into the sky, and some time afterward, getting possession of the box which held the sun, he changed himself into a raven and flew away with it, the greatest prize of all, which he delayed not to set in the heavens. Having thus formed the earth and given it light and heat, his next step in order of progression was to further prepare it to receive inhabitants.

At that time, although there was plenty of water on the earth it was all salt. The only fresh water to be had, according to the Haidas, was in the possession of the above mentioned Chief Settin-ki-jash, and from him the Raven obtained it in the following manner: "The chief had a daughter and to her Ne-kilst-luss covertly made love, and became her accepted lover, and visited her by night many times unknown to her father. The girl began to love him very much and trust in him, which was what he desired; and at length, when he thought the time ripe, he said that he was very thirsty and wanted a drink of water. This the girl brought him in one of the closely-woven baskets in common use. He drank only a little, however, and setting the basket down beside him he waited till the girl was asleep, when quickly turning himself into a raven, and lifting the basket in his beak, flew out by the smoke hole in the top of the house. He was in great haste, fearing to be followed by the chief's people. A little water fell out here, and a little there, causing the numerous rivers which are now found, to flow; but on the Haidahs country, a few muddy drops, like rain, fell, and so it is that the streams there are small and muddy to this day."

The Klinquets of Tongas, Alaska, say that the Yehls brother, Kanook, the wolf, or the evil principle, had all the fresh water in a well in his house, which water he guarded carefully, lest any one should steal it. And to this house, one day, went the raven in order to get some of the water. While going along he met Kanook, who invited him to his house in order to have supper and pass the night. While going along, (according to some accounts), they entered into conversation, Kanook speaking first and asking Yehl how long he had lived in the world? Yehl proudly answered: "Before the world stood in its place I was there." Yehl next questioned Kanook. "But how long hast thou lived in the world?" To which Kanook replied: "Ever since the time that the liver came out from below." Then said Yehl: "Thou art older than I." Upon this Kanook, to show that his power was as great as his age, took off his hat, and there arose a dense fog, that the one could no longer see the other. Yehl then became afraid and cried to Kanook, but he answered not. At length after seeing that Yehl was in trouble, he put on his hat, and the fog vanished. After reaching Kanook's house they had a little more conversation and a good supper, along with it the luxury of fresh water, which Kanook drew from the well in his house. Yehl seeing where he got it, was determined to watch his opportunity. So after supper and a little more conversation they all retired. In the night, thinking all were asleep, Yehl got up and helped himself to the water, but Kanook's wife, who happened not to be asleep, called to her husband that Yehl was stealing the hein (water.) Yehl, who by this time had a little water basket filled, quickly assuming the bird shape, flew

away with it to the smoke hole in the roof, which in the darkness he did not readily find. Kanook by this time had got up and made a fire on which he threw green boughs, making such a smoke that Yehl, who before that was a white bird, left the house with the water a jet black one. Flying along over the mainland he threw a little water in various places as he passed along, from which rivers immediately began to flow. Having made the rivers the raven's next step was to fill them with fish. Which was done in the following order. I quote a tradition of the Haidas.

After Choouh made the rivers he looked for something to put in them. Looking around, he discovered that an old chief named Tsung (the beaver), or as my informant called him, Tsoon-kull, "beaver-skin," had all the salmon in a river and lake of his own. Determined to have some, he turned himself into a little boy and went to the old chief's house, and asked for some food as he was hungry. Seeing him to be a goodly looking boy, he told him to come in, which he did. When food was placed before him it largely consisted of salmon. This the Raven considered very nice, and decided to get them into the newly formed streams. In order to gain the prize he made himself in many ways serviceable to the old chief, who soon came to like him and to give him charge of his house when he went a-fishing. Every time he went he told his boy to stay inside until he returned, fearing he would follow and so discover where he got his much prized fish. After a while his boy so rose in the old fellow's favor that he not only took him along with him, but at length stayed at home himself and sent his boy to fish. Now was the Raven's opportunity; one day he went alone, caught a lot of fish, took them and placed them in the rivers, and Tsoon-kull saw him no more. Having secured enough salmon to replenish the rivers, Yehl's next step was to secure a supply of candle fish, volachens, which he managed in the following manner. Settin-ki-jash, the before mentioned chief, had them all in his possession, and from him he got them in the different streams. In the reports of the Canadian Geological surveys, 1878-9, an excellent version of this story is to be found from the pen of Prof. G. M. Dawson, which I shall give.

The Shug was a friend or companion of the chief, and had access to his property, including his store of voluchens. Yehl contrived that the Scagull and the Shug should quarrel by telling each that the other had spoken evil of him. At last he got them together, when, after an angry conversation, they followed his advice and began to fight. Yehl knew that the Shug had a voluchen in its stomach, and so urged the combatants to fight harder and to lie on their backs and strike out with their feet. This they did, and finally the Shug threw up the voluchen which Yehl immediately seized. Making a canoe from a rotten log, he smeared it and himself with the scales of the voluchen,

and then coming at night near the great chief's lodge, said that he was very cold and wished to come in and warm himself, as he had been making a great fishery of voluchens, which he had left somewhere not far off. Settin-ki-jash said this could not be true as he only possessed the fish, but Yehl invited the chief to look at his clothes and at his canoe. Finding both covered with voluchen scales he became convinced that voluchens besides those which he had must exist, and again in disgust at finding he had not the monopoly, he turned all the voluchens loose, saying at the same time, that every year they would come in vast numbers and continue to show his liberality and be a monument to him. This they have never failed to do since that time.

With regard to herrings, whales and all the other fishes, and also the various animals, I have as yet never found any traditions connected with their coming upon the earth, other than that Ne-kilst-luss, or the Raven, made them all, or rather got them somewhere and put them in their places on earth. In my next paper I will treat of the creation of mankind.

The majority of the collectors of traditions get them from the Indians without any order, that is they tell what they are asked about. Yet, nevertheless, they have order in all of their myths. Ask an intelligent Indian his people's ideas of creation, and he will give it in the same order or rotation of events as I have done. In giving them I only followed the original. Each event recorded is considered by intelligent natives as an embodiment of a natural condition, as chaos or confusion gives place to order, after which the heavenly bodies appear, when the chief, or Queenah, lost his boxes, and so on through all the various periods and epochs through which this world has passed down to man.

JAMES DEANS.

Washington Territory.

## THE PYRAMIDS OF TEOTIHUACAN.

During the struggle which ended in the capture of Tenochtitlan, the soldiers of Cortez encountered, while on their forays through the adjacent territory, ruins of an ancient city, twenty-eight miles northeast of the capital. These ruins were six leagues in circumference, and all over that great area were scattered remains of buildings of stone and cement, and on the principal street were vestiges of what may be justly designated as temples and palaces, elevated above the level, on imposing foundations, with broad stair-cases of artificial stone, still in excellent preservation, leading from the street to broad portals. The calamity that overtook Teotihuacan was so destructive that everything of a perishable nature was destroyed; nothing remained except the walls of houses and these were almost entirely covered by masses of wreck and rubbish, so that the sites resembled, at first glance, mere hillocks or mounds of earth and stone, covered in many instances with rank vegetation. Occasionally well defined walls peer above the mass, and from these the plan of the buildings can be traced. Fire and earthquake each performed their part in reducing this once prosperous city which, according to Torquemada, contained twenty thousand houses, to the desolation that is now presented. The Aztecs, who were themselves intruders on the soil six hundred years ago, gazed upon the same scene with the bewilderment of barbarians, and with as little knowledge of the works as had the swaggering soldiers of Cortez.

In the midst of the ruins of Teotihuacan, or City of the Gods, (so named on account of the numerous images found within its limits,) stood then, as stand now, two structures known respectively as the pyramid of the Sun, and the pyramid of the Moon. The last named is 137 feet in height; east and west line of base 468 feet; north and south, 390 feet. The pyramid of the Sun is 198 feet in height; north and south side of base, 696 feet; east and west, 660 feet; orientation, according to Senor Cubas: east face of the sun from south to north  $1^{\circ} 30'$  N. E. These pyramids are 2,700 feet apart. At the base of the pyramid of the Moon is an overthrown idol of trachyte, nearly ten feet in length; near this idol is a mound which has an excavation at its western side. This is entered with some difficulty, but the space enlarges within a few feet sufficient to enable one to stand upright. There is a chamber constructed of adobe, and niches, perhaps for sepulchral purposes. This chamber, however, is now entirely empty. I will now, in an attempt at further description, follow notes taken at the time of my sojourn in that locality: We now ascend the pyramid of the Moon, the task



being somewhat difficult, as it must be made by climbing over heaps of stones, diverging often from a direct course upward, making the route longer but a more gradual ascent, noting the occasional slabs of cement, resembling artificial stone, which at one time seems to have covered the entire surface of the pyramid. At last we reach the summit, almost out of breath. Here an impressive scene is presented. Looking to the south, we see the broad street which has been named The Road of Death, to accommodate a fanciful theory that has grown up from a tradition. This street begins at the base of an esplanade, at the foot of the pyramid, diverging from a straight southerly course so as to leave the pyramid of the Sun a short distance eastward. The line prolonged would reach the base of the Matcinga mountain, four miles distant. The so-called Road of Death is 130 feet wide, flanked on each side by mounds and ruins of buildings, the walls of which occasionally stand above the rough mass of volcanic rock, while the cement-covered stairways glisten in the sunlight and as if in mockery inviting one to ascend them and to see nothing when one gets there. At intervals there are remains of structures that half way traverse this street. The pyramid is apparently made of the volcanic rock of the region and earth; there is an excavation or tunnel in the structure which leads towards the center 24 feet, where it terminates in a pit or well, 15 feet in depth. The walls of this tunnel and of this pit are formed from adobes or sun-dried brick, similar to the sepulchral chamber in the small mound already mentioned. This pyramid, like all others in Mexico, is truncated, giving the impression that it was originally crowned with some kind of a building. To the south, is the larger pyramid, which in some respects is the greatest mound on the continent. It has not as great a base as the one at Cholula nor is it equal in that respect to the one at Cahokia, Illinois, but is of greater height than either. To ascend this structure we go south on the broad street half a mile and then pass half way around its circumference to the eastern slope, where we find first a stone stairway of twenty steps, which is the beginning of a series of zigzag ascents with nine landing-places, terminating in the final flight of ten steps leading to the summit. In the center of the pyramid is a circular stone monument, three feet in height, surmounted by a cross—the work of latter-day priests as a token that the religion of the Spaniards has taken the place of worship of the Sun. The area occupied by the pyramid is a little over eleven acres, only two acres less in extent than that of the great pyramid of Gizeh, in Egypt. The innumerable blocks and slabs of cement or artificial stone scattered around, some of them in position, indicate that originally the surface of the pyramid was covered completely with such a casing. The pyramidal outlines are still preserved, notwithstanding the surface is broken and covered in many places with

vegetation. There are certain appearances leading one to believe that the stairway of stone is intrusive, or made by other hands than those of the builders of the pyramid. This later work may have been in the nature of repairs, however, of an original stairway and made when a nation of invaders took possession of the city and dedicated the pyramids to the sun and the moon. Of this event, Alfred Chaverro, the eminent Mexican archæologist, treats in Chapter V. of his Appendix to Duran's "History of the Indians of New Spain." From Chaverro I quote:

"We have seen how the Toltec tribe during its wanderings had journeyed under the government of the priesthood personified under the name of Huemac. According to Ixtlilxóchitl, after the founding of Tóllan, the newly-arrived tribe was governed six years without a king. According to the Annals of Cuauhtitlan, from the year 674 to 700; that is to say, for 26 years, or two *tlalpilli*, the theocratic rule continued. This was natural, as it was the government of the tribe during its wanderings. But their establishment in Tóllan was not the founding of a new city, which would not, perhaps, have changed so soon their mode of government. The Toltecs had been firmly established for many years in Tollantzinco, preparing themselves for most important conquests. On the one side they had the Cuextecs, and it is to be presumed, since they kept away from them in their wanderings, either that they had been driven from that territory, or that that mountainous country had not agreed with their habits of life. Besides, the civilization and language of the south prevailed among the Cuextecs, and they had few points of contact with them. It was not thus on the other side, where were the cities of Teotihuacan and Cholóllan. The southern civilization, setting out from the gulf coasts toward the central plateau, had established three great centers, these two and Papantla. Papantla had preserved its primitive character, being farthest from the Naho influence and nearest to the southern boundary. Teotihuacan and Cholóllan had suffered the ancient invasion of the Ulmecs, to such an extent that the traditions pointed out Xelhua as the builder of the pyramid of this latter city. We do not know what influence this invasion had on the language and religion of these cities; but I believe that it was not very important, although we find that the new race, a product of the mingling of the invaders and invaded, took the name of Nonoalcs. We have, indeed, data from which we can say that in Teotihuacan the worship of animals continued, and that the pyramid of Cholóllan was dedicated to a kind of monstrous toothed bird, the symbol of the air. Among the fossils of the drain has been found the head of a bird similar to the curious figure of the hieroglyphs; and it may be suspected that from it was taken the symbol of the *checatl*. The Nonoalcs, on extending themselves from Cholóllan to Teotihua-

can, had crowded the Otomies toward the north; and these latter had founded the city of Manhemi, afterwards Tóllan. The Chichimecs, on arriving and mingling with some of the Nonoalc tribes, had formed the new Chichimec-Nonoalc nation, which extended between Manhemi and Teotihuacan. This was the line which the Toltecs were to invade.

We have already seen that they did invade and subjugate the Chichimecs of Cuauhtitlan, and that they occupied the ancient Manhemi, converting it into the new Tóllan, in the year 674. During the same year they extended their conquest to Teotihuacan and Cholóllan; and, finding in them these three pyramids, when they imposed their religion on the vanquished; there being two pyramids at Teotihuacan, they dedicated them to the Sun and Moon, which always go together, the moon following the sun without ever being able to overtake him, according to the Nahoia tradition; and the third, that of Cholóllan, they consecrated to the Evening Star. Thus the Toltecs, in the country which they were conquering for a place in which finally to establish themselves, found three gigantic altars for their three great deities: *Tonacatecuhli*, the sun, *Tezcatlipoca*, the moon, and *Quetzalcoatl*, the evening star.

From various data, it was formerly believed that this event should have happened in the year 1035. It was not probable, however, that the Toltecs had delayed so long in imposing the principal articles of their faith upon Teotihuacan, when it is known that it was their holy city, the city of their gods. It was more logical that such a great religious event should occur at the time of the conquest, and under their first theocracy, and so, in effect, it did happen. Gomara, who wrote in 1552, says that since this event, up to that time, 858 years had passed away; and Senor Orozco, guided by this date, in the monumental work, which is now being printed, on our ancient history, fixes the year 694 as that of the dedication of the pyramids. But he did not notice that Gomara himself says that in *ce tochtli* began the sun of Teotihuacan; that is to say, in 674. Without doubt the copyist, in the first impression substituted, by error, 858 for 878. This is confirmed by the date which we have of the arrival of the Toltecs in 674; then they occupied the Manhemi of the Otomies and the Teotihuacan and the Cholóllan of the Nonoalcs; then they consecrated the pyramids to the heavenly bodies, of which dedication there remains a beautiful legend which symbolically confirms the historical ideas which we are now illustrating."

It will be seen by these narrations that the origin of the Teotihuacan pyramids is involved in as much obscurity as the great pyramid of Gizeh; the design of which Piazzzi Smith ascribes to divine inspiration and the more practical Proctor claims to be a manifestation of the astronomical ideas of the ancients.

According to the authors to whom Chaverro gives credit, the pyramids of Teotihuacan were captured by the Toltecs and adapted to their religious customs over twelve hundred years ago. Prior to Toltec possession they were in the hands of a people who worshiped animals, and here arises a grave doubt as to whether animal worship is indicated by the structures themselves. There certainly are no exterior indications of such a worship, no remains of idols nor among the innumerable terra cotta images that are still to be found in the locality, to show that animals were deified. Appearances justify a belief that the ante-Toltec inhabitants were themselves aliens to the country, and this carries Teotihuacan still further back into the misty past. Pyramidal monuments, whether of earth or stone, seem to be the universal expression of leading ideas among the ancients, whether in the Old World or the New. In Egypt, the structures take the form of a perfect pyramid; in Asia and the two American continents they are truncated, leading to the opinion that they were crowned with temples. The resemblances are so close between American and Asiatic structures as to attract marked attention. If the Mexican structures could be transplanted to India they would not look out of place, but harmonize with the surroundings; on the other hand, if it were possible to introduce one of the temple sites of India into the depths of a Central American forest, it would be classed as one of the monuments of that strange civilization which we are now considering.

It need not be inferred that in citing these comparisons, I am led to setting up any belief based merely on resemblances or coincidences, notwithstanding the high authority that might be urged as a precedent. From far less justifiable coincidences Egyptologists established a theory of the Nile pyramids and a school of archæology, the teachings of which the world is supposed to accept without question.

The Aztecs, as we have already observed, were a tribe of intruders on the soil, when they occupied the valley of Mexico, three hundred years before the Spanish conquest. The particular spot on which they made their first settlement had not perhaps been occupied by the ancients, for the shores of Lake Texcoco were marshy and undesirable as a place of residence except for barbarians. The early chronicles of Tenochtitlan relate how the Aztecs subsisted on fish, insects and the queer reptile known as the axolotl; the Aztecs, however, were imbued somewhat with the spirit of progress and after they had become a sedentary people imbibed some of the characteristics of the nations that had preceded them in Anahuac. They found the remains of a civilization that was in a manner extinct, but perhaps had an opportunity of coming in contact with the relics of an expiring race from whom they received valuable knowledge of the arts and sciences.

Certain it is, that they claimed kinship with the Toltecs; adopted their idols, and persuaded the Spaniards that the great works of sculpture, such as the Sun or Calendar Stone, and the Sacrificial Stone (so called), which were found in their possession, were the results of Aztec art and industry. It was to the interest of the Spaniards to admit such claims, as it magnified their own importance in the conquest of a people capable of executing works indicating civilization and power. The tendency of the school of Mexican archæology has heretofore and until within the last few years been to foster and promote these ideas, but lately decided progress has been made in a more rational direction.

The foregoing facts and study of the Mexican pyramids are submitted with the hope that further inquiry may be instituted.

Ottumwa, Iowa.

S. B. EVANS.

---

## Editorial.

---

### A FEW WORDS FOR THE ANTIQUARIAN.

We have received many compliments for *THE ANTIQUARIAN* since the beginning of the tenth volume. The new cover and style of paper seem to please our readers and to call for the commendations from the press. We are grateful for these kind words and are happy to make our acknowledgements. We would, however, call attention to the contents of the magazine, both of the numbers which have been issued and those which may be issued.

**THE DIFFERENT DEPARTMENTS.**—It is well known that the science of archæology is divided into several different departments, such as archæological relics, aboriginal literature and linguistics, native mythology and folk-lore, art and architecture including symbolism and its associated topics; also the science of races or ethnology and the more technical science of anthropology and anthropometry. All of these departments have been represented by the magazine, and some of the ablest writers have furnished articles upon them.

**THE CONTRIBUTORS.**—We are free to say that few magazines have had a better class of writers than *THE AMERICAN ANTIQUARIAN*. Early in the history of the magazine we were favored with contributions from distinguished gentlemen, such as Prof. Rasmus B. Anderson, Ad. F. Bandelier, E. A. Barber, Dr. Gust Bruhl, Rev. W. M. Beauchamp, Rev. J. O. Dorsey, A. S. Gatschet, Dr. Horatio Hale, Hon. Bela Hubbard, Rev. J. C. McLean, Prof. O. T. Mason, Col. Garrick Mallory, Rev. O. D. Miller, D. D., Isaac Smucker. At a later date other names

were added to the list, such as Prof. John Avery, Chas. Aldrich, Dr. D. G. Brinton, C. W. Butterfield, Miss F. E. Babbitt, Dr. J. D. Butler, C. H. Brinkley, A. F. Berlin, Rev. M. Eells, Rev. J. N. Fradenburg, Prof. Henry W. Haynes, Rev. H. C. Hovey, Dr. Earl Flint, L. P. Gratacap, T. H. Lewis, Prof. Aug. C. Merriam, W. J. McGee, Dr. Washington Matthews, O. H. Marshall, Rev. Edward Neill, Dr. Chas. Rau, Henry Phillips, Jr. These are American writers well known to the public as authors of books, and as specialists in the various departments of archæology. Besides these we are happy to refer to the following distinguished persons as contributors in foreign lands: F. G. Fleay, Rev. A. H. Sayce, D. D., Rev. W. S. Lachszyrma, Mrs. Harriet Murray Aynsley, in Great Britain; Rev. Wentworth Webster, France; Lieut. R. C. Temple, India; Rev. Dr. Edkins, of China.

**STANDING OF THE MAGAZINE.**—THE AMERICAN ANTIQUARIAN has come to be regarded as authority. This is evident from the following fact: frequent references are made to it in nearly all the books on archæology which have been written in the last ten years, such as "Nadaillac's Prehistoric America," "Short's North Americans of Antiquity," Allen's Prehistoric World," "Gatschet's Migration Legend," Warren's Paradise Found," "McAdam's Records of Ancient Races," "Shepherd's Antiquities of Ohio." The magazine is found in all of the best libraries, and complete sets are being made up by the libraries which did not take it at the beginning. Nearly all the subscribers bind their sets and keep the magazine as a work of reference.

**A REPRESENTATIVE JOURNAL.**—THE AMERICAN ANTIQUARIAN is a representative journal. It does not confine itself to any one state, or to any particular section, nor to any particular class of writers, or to any school of archæology. It is free and unbiased. No one in authority directs its investigations, no patronage controls its line of thought, but it represents the whole country, and is the organ of archæologists wherever they reside. While the best scholars in the country write for it, many persons who have had few advantages for study and yet have valuable collections are also contributors. Government reports and society journals may be more technical, but they can not contain any more varied or reliable information. The magazine is not exclusive. It is open to all classes. It is written in a popular style and is designed for the people.

**CORRESPONDENCE.**—One of the noticeable things about THE ANTIQUARIAN is that so many have corresponded for it. Persons situated in various parts of the country, who have been engaged in gathering relics, studying languages, tracing out myths, or exploring mounds, have been free to forward to the magazine an account of their discoveries. This has enabled us to keep pace with the progress of discovery. Many finds have

been made known to the public through this correspondence, and we find that this department is highly prized by the best scholars in this country and especially by those in foreign lands.

**THE GEOGRAPHICAL DISTRIBUTION** of these correspondents has enabled us to take a wide range. The following are some of the localities from which we have received letters and contributions: Vancouver's Island, Arizona, Alaska, Washington Ter., Ontario, Oregon, California, Nicaragua, U. S. Columbia, Florida, Mississippi, Georgia, Utah, Indian Territory, Colorado, Kansas, Tennessee, Ohio, New York, New Hampshire, Maine, Wisconsin and Minnesota.

**FUTURE PROSPECTS.**—The prospects of the journal are encouraging. **THE ANTIQUARIAN** was so early in the field that it drew to itself the interest of archæologists in all parts of the world. The interest is likely to increase. The magazine is relied upon in Europe for information from different sections of this country, and at the same time is taken in America because of the variety of its resources and the cosmopolitan character of its contents. Our future success is assured by our success in the past.

**NEW CONTRIBUTORS.**—We shall expect that the same contributors will continue, but in addition we have the prospect of a large number of new writers. These writers and their departments are as follows: (1) **ARCHÆOLOGICAL RELICS.**—The articles on the archæology of Western Europe, by Thos. Wilson, have been highly prized. They will be followed by articles on "Relics in America," by Mr. G. F. Kunz, of New York, Mr. W. F. Perkins, and several other gentlemen. (2) **FOLK-LORE AND MYTHOLOGY.**—Mr. James Deans has furnished some very interesting articles on the myths found among the tribes on the northwestern coast. He has an excellent opportunity of gathering myths, as he has spent many years among these tribes and is well acquainted with the Indian languages. These myths have never been published before. We are able to promise rich things from this source. Besides Mr. Deans other gentlemen situated in various parts of the country have been gathering material which they will furnish to **THE ANTIQUARIAN**. Mr. H. S. Halbert, of Mississippi, has in preparation a myth or tradition of the Cherokees. Dr. Franz Boaz has promised articles on the myths and names of the Esquimaux. (3) **ART AND ARCHÆOLOGY AMONG THE CIVILIZED RACES.**—We call attention to the valuable articles of Mr. H. H. Bancroft, Mr. E. G. Barney, L. P. Gratacap, Dr. Earl Flint on the antiquities of Mexico, Central America and South America. In addition to these we have others on hand, from Mr. S. B. Evans, who visited Mexico a few years ago as special correspondent of *The Chicago Times*, and has made the subject a special study since then, also from Mr. John Leslie Garner, the translator of *Biart's* books on the Aztecs. (4) **SYMBOLISM AND**

**PHONETICS.**—The magazine has already furnished a number of articles on symbolism, hieroglyphics and phonetics from such writers as Dr. D. G. Brinton, Dr. Farquharson, Dr. Cyrus Thomas. The subject will be continued, and we think our readers will find many things to interest them in it.

**THE SUBJECT OF PALEOLITHICS** in this country is increasing in interest. The Smithsonian Institution has just issued a circular of enquiry, asking for information as to the discovery of rude relics resembling paleolithics. Reference is made in the circular to the article by Mr. A. F. Berlin in **THE AMERICAN ANTIQUARIAN**. It would naturally be expected after this that the magazine should solicit other letters and contributions on the subject.

**OUR CLAIM ON THE ARCHÆOLOGISTS.**—**THE AMERICAN ANTIQUARIAN** was the first in the field. For a time it was the only one in this country; it then occupied the whole field. Various journals have been started, some of them devoted to classical, some to biblical, and some to local archæology. Two or three have been started during the year. They are society journals, sustained mainly by members of the societies. Members of local organizations have thought they needed these journals to represent their society. We have no fault to find with that. The question is whether society journals which enter the field, and undertake to draw to themselves contributions and subscribers, do not make an increased rivalry among other societies and divide the different sections of the country. **THE ANTIQUARIAN** was designed to unite archæologists. It has succeeded and will succeed on account of this. There is a power in education. Notwithstanding the increased number of archæological and scientific journals, the patronage of the older subscribers is continued. There are archæologists enough in this country to sustain this magazine, even if every local society should establish a journal of its own. Many of these archæologists are situated where they cannot join a society. We maintain that it is for the interest of all such to support **THE ANTIQUARIAN**, and we have no doubt that they will do so. We make our appeal not only to the old subscribers who have been so faithful through these years, but we ask for new subscribers. We ask our readers to help us in securing these. Their recommendation will be very serviceable. More subscriptions have been gained by means of such recommendations than in any other way. We ask our subscribers if they will not make the effort at this time? The tenth volume will close the bi-monthly series. **THE ANTIQUARIAN** might become a monthly if its patrons were determined to make it so. It would only require a little effort on the part of each one to begin a new series on a new basis and to make it a monthly magazine. Is it not worth the effort?



x

## PALEOLITHICS AND NEOLITHICS.

**THE SHAPE OF PALEOLITHIC IMPLEMENTS.**—In regard to the shape of the paleolithic implements found in this country and in Europe, there are many inquiries to be made. Mr. Evans classifies paleolithic relics under three heads—the spearhead-shaped, the almond-shaped, and the knife-shaped. Between the spearhead and the almond-shaped, and between the almond-shaped and the knife-shaped there are various intermediate gradations. Sir John Lubbock says: “their forms are peculiar; some are oval, chipped up to an edge all around, and from two to eight and nine inches in length; the second type is also oval, but somewhat pointed at one end; others again have a more or less butt at one end and pointed at the other. Still another type have the cutting end rounded off but not pointed. Some of these were intended to be held in the hand and may be considered as a fourth type. Gabriel de Mortillet says: “Some paleo-ethnologists contend that the Chelléen epoch had no other implement than the almond-shaped axe, chipped on both sides. But Boucher de Perthes speaks of the heavy, rude lance-heads, found in the gravel beds of the Somme, associated with the rude, heavy chipped paleolithic axes, associated with the so-called type of St. Acheul. Sir John Lubbock has given several illustrations of paleolithic relics as found in distant localities, such as Madras in Hindoostan. These stone implements resemble the almond-shaped implement and the axe of the St. Acheul type, and might well be classed with them, and has referred to the flint implements, which were found in a gravel pit at Hoxne, in Suffolk, as early as the year 1800, as good specimens. The question is as to the American relics. Dr. C. C. Abbott has given several illustrations of paleolithic relics, but so far as we have seen, the types or shapes differ from the typical relics of France and England, with the single exception of one type—that is, the rude spear-head. Dr. Abbott speaks of the turtle-back relic of the hoe-blade shape, of the relic resembling a pick, and of another the shape of a modern axe. These are, however, specimens taken from one cabinet, and cannot be regarded as furnishing a basis for classification. In fact the pick and the axe seem to have been selected on account of their imaginary resemblance to modern tools, and must be regarded as exceptional specimens. No classification has been reached by American archæologists, except the one suggested by Dr. Abbott.

**PALEOLITHIC AND INDIAN RELICS. HOW CAN THEY BE RECOGNIZED?**—Rude flint relics resembling spear-heads and axes

and lances are sometimes found upon the surface of the ground in this country. The question is, how can we distinguish these from the paleolithic lance heads, spear heads and axes which they resemble so closely? Relic hunters traverse the valleys of the rivers and cross over hill tops where there are gravel beds which belong to the glacial period. Others may occasionally come upon relics embedded in the gravel in the railroad cuts, street grades, cellars and excavations. How can they tell whether they have found a paleolithic relic or not? The writer at one time came upon a collection of relics of a very rude sort in the hands of a dealer, and found among them many specimens which in shape resembled the paleolithic spear heads. He ascertained afterward that the relics were composed of a lot of refuse or rejected specimens from the cabinet of a collector. They were only imperfect specimens which had been thrown aside by the manufacturer because of some flaw in the material. They were rude because they were unfinished. The answer to this question would probably be as follows: Paleolithic relics are generally covered with a vitreous gloss which has a color which partakes of the deposit in which they are found, yellow in ochreous clay; black in feruginous sand. Our response to this is, that the vitreous gloss is often given to a flint relic by friction of any kind. The sandstone hoes from Tennessee and the flint spades from Kentucky are often covered with a gloss. The writer has picked up stone arrow-heads and spear-heads from the sandy beach of Lake Michigan, where the wind and the water and sand had worn them, and they were covered with the same black, sooty, vitreous gloss, that a paleolithic relic has, and yet they had been left there from the encampment of Indians. It might be further said that the paleolithic relics found by Dr. Abbott in the Trenton gravel, and by Miss Francis E. Babbitt at River Falls, Minn., are destitute of this vitreous gloss. The relics in the Trenton gravel are gritty on the surface, as they are made out of trap, or argelaceous rock, which does not so easily admit of a gloss. The relics from River Falls are quartz, and are glassy in appearance; but after all do not have the semi-opaque patina or gloss which is peculiar to most paleolithics.

PROF. HENRY W. HAYNES' OPINION ON PALEOLITHICS.

To answer your last question first, "Did I ever find a paleolithic specimen which differed from the mineralogical horizon in which it was discovered"? In reply I will state that paleolithic implements are found in drift deposits and associated with the bones of animals either extinct or emigrated, and I never heard of the term "mineralogical horizon" being applied to such deposits, which are made up of comminuted fragments of all the different rocks of the region.

All European paleolithic implements are either made of *flint*,

which is the case with nine-tenths of them, or *quartzite*, which is a mineral entirely unlike the *white quartz*, of which Miss Babbitt's specimens are made. As we have no flint on this continent, like that of the chalk deposits of Europe, although we have a chert that very much resembles it, no paleolithic implements have ever been found on this continent of the same material as the European ones. All the specimens I found in Egypt were "flints," and I have always so designated them. It is a tertiary limestone region and has the usual fossils, nummulites, etc., of such deposits, including, of course, nodules of flint. But I have often found implements in the desert where there was no flint *in situ* in the limestone strata. The argillite, of which Dr. Abbott's paleolithic implements, found in the Trenton gravels, are made, does not occur *in situ* for several miles from the locality, where the implements were met with.

Perhaps it is needless for me to add that while it is entirely proper to speak of "*paleolithic fossils*" to discriminate types of implements, the *true test* of whether objects are actually paleolithic or not must be sought for in the consideration whether they are found in association with the remains of fossil animals. In all other cases the question is still an open one. I am forced to admit.

I am very sure, however, that true paleolithic implements have often been found in places where no animal bones have yet been discovered.

Sincerely yours,

HENRY W. HAYNES.

MINERALOGICAL HORIZON.—This term, if used at all, would refer to the mineralogy of the region. The relation of paleolithics to the rocks in the vicinity of gravel beds is the point concerning which the enquiry is made.

THE STONE AGE IN ASSYRIA AND CHALDEA.—The question whether the stone age was of universal prevalence, and whether it preceded the historic age in the east, has often been discussed. A discovery or rather interpretation of a Babylonian cylinder, by Dr. W. H. Ward, may be said to partially settle this subject. This cylinder contains figures upon it which represent the sun god Shamash, as coming through a gate between two mountains—probably the Median mountains. In his hand is a weapon of power; this weapon is notched along its whole length except where held in his hand. In one case an attendant stands holding the weapon, while the god's two hands are engaged. Dr. Ward says "that the notched or saw-like object carried in the hand of the god is not a branch, as conjectured by Ménant, but a very archaic weapon of the stone age, like the Mexican Maquahuitl, being a club armed with flakes of flint set in grooves, as sharp stones are even yet set in eastern threshing machines. One or two of the Hittite hieroglyphs seem to represent a similar club.

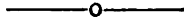
## ARCHÆOLOGY IN WISCONSIN.

### LIST OF RELICS ADDED TO THE MUSEUM OF THE STATE HISTORICAL SOCIETY OF WISCONSIN.

Copper adze,  $14\frac{3}{8}$  inches long,  $2\frac{1}{8}$  inches at narrow part and  $5\frac{1}{8}$  inches at cutting edge, weighing  $4\frac{3}{4}$  pounds, found on the farm of Archibald Day, on sec. 5, town 23, range 2 west, six miles south of Neilsville, Wis., and forty rods from Black river, by W. H. Lowry, July 5, 1887. Antique specimen. Presented by him through M. F. Satterlee, Neilsville. Copper spear point, six inches long and three wide at base. Fine specimen, found near Lake Shawano, by Thomas Broderson, one foot below the surface; presented by Prof. L. D. Roberts, of Shawano free high school. Stone axe grooved, found in the city of Madison; presented by J. E. Williams, of Madison. An old wooden anchor, found in Fox river, in thirty feet of water, near Main street bridge, Green Bay, by Jacob Hoffman and other fishermen, July, 1887. The specimen gives evidence of great age and has given rise to much discussion among antiquarians. Presented by Porter Barrish, Green Bay, through Dr. D. Cooper Ayres, Green Bay. Three fragments of ancient pottery found on the northern end of Lake Pepin, at the outlet of Isabelle creek. Fine specimens. Presented by J. F. Morau, Bay City. Adobe bricks from one of the old Spanish missions at San Jose, California. Presented by Dr. Joseph Hobbins, Madison. Wooden bow and quiver, procured from a chief of the Sakalat tribe of Indians, at the foot of Mt. St. Elias, Alaska, used in the killing of hair and fur seal. Presented by B. K. Cowles, Sitka, Alaska. An old copper kettle used for many years in his travels among the Oneidas of Wisconsin, by Eleazer Williams; presented by Miss Josephine Penney, Little Rapids, Brown county.

INDIAN CURIOSITIES OWNED BY SAM'L S. GRUBB, BARABOO, WIS.—Indian Pipe of Peace—Bowl of red pipe-stone; stem about feet long, ornamented with porcupine quills and horse hair. Red Stone Pipe Bowl, the bowl being a nicely carved head, the eye-balls and other parts being of lead. Head is all right, but a piece broken off of the small part where the stem goes in. One small pipe bowl; one large curiously shaped pipe bowl; a singular pipe of black stone about one foot long by six inches wide. The pipe represents a sled with singular looking men, animals and a horse on it. The tobacco is placed in a window of the house, the runner of the sled being the stem. Supposed to have been made by natives of the west coast of Alaska. The

pipe is broken, but it is fixed substantially on a piece of board (being flat in shape). Piece of ancient brick Aztlan, horn skinning implement taken from an Indian mound. Rare prehistoric beads (not modern) taken from an Indian mound. A *splendid* tomahawk pipe of red stone, ornamented with lead, with a curious spiral stem. A large and *extra fine* Indian flageolet; can make nice music on it; quite a curiosity. One hundred and forty stone spear and arrow-heads. Large and nicely finished stone implement for straightening arrows by running them to and fro across the groove. Fine discoidal stone, for playing some game, about seven inches in diameter. Stone—do not know its use. Stone with groove around it for fishing a dipsey. Stone for grinding paint with groove to catch it; also a specimen of stone used for paint. One large earthen pot found in Florida by self. Wooden bow with five arrows. Indian bow made of sinews with exception of a thin strip of wood on the back; presented to me by Commodore John P. Gilles, of Wilmington, Del. Chinese bow, handsomely decorated. Stone axe, skin dressers, etc.



## DID OUR ABORIGINES SMELT GALENA?

*Editor Am. Antiquarian:*

It is commonly held that the fusibility of galena was not known to our Indians. A curious find, however, in Boscobel, Wis., seems to point the other way, and leads me seek more light on this question through the *AMERICAN ANTIQUARIAN*.

The relic to which I allude is a bit of lead about the size and shape of the stem of a tobacco-pipe, but bent into the shape of the tiny lamprey eels which run up our western rivers. Accordingly it struck the finder—Mr. C. K. Dean—as made after the model of those eels. Its length, two and one half inches, is about the same with that of those creatures. It is also almost a fac simile of the wood-cut in Webster's Dictionary to illustrate the word *Lamprey*.

The place of finding was on a rather high and steep eminence of the valley of Sander's Creek, which at some remote period had been an aboriginal camping-ground. It had been buried to the depth of about two feet, but wind and weather had laid it bare, so that it was discovered on the surface of the ground. Five slits are cut in the lamprey before me, one in the head and four in the lower part of the body.

Is any other find of this sort known? What other proofs are there of galena being melted by aborigines?

PROF. JAMES D. BUTLER.

Madison, Wis., Dec. 19, 1887.

8

## CLANS AMONG THE PUGET SOUND INDIANS.

Dr. Geo. Gibbs, in his report to the Ethnological Bureau in 1876, says of the Indians on the northwestern coast: "No division of tribes into clans is observable, nor any organization similar to the Eastern tribes, neither have the Indians of this (Washington) territory emblematical distinctions resembling the totem. Among some of the northern tribes these exist. There is no priesthood aside from the Tamahnous men, or doctors, who have, by virtue of their office, an important part to play in leading the ceremonial incantations which accompany proceedings of general interest." This is an interesting point, but one in which we desire further information. It is a question whether the clan system does not exist among all tribes. Mr. L. H. Morgan maintained that it did, though he in his opinion may have been influenced by his peculiar theories concerning ancient society. Rev. Mr. Eells speaks about the totem posts and the Tamahnous ceremonies, but does not speak of clans. Is the Is the clan system confined to the tribes further south? Is it the outgrowth of the tribal system?

Mr. F. Boaz, in the last number of the *ANTIQUARIAN*, speaks of tribal divisions of the Eskimos, but says nothing about clans. In the last number of the *American Philosophical Society* he speaks of the Thlinkit and Salish tribes. He says "they are divided into Gentes, but that the child belongs to the gens of father instead of to the gens of the mother, as in the case of the tribes further north."

—o—

## BOOK REVIEWS.

*Ruins Re-visited and the Worlds Story Retold by an Americanist.*

A book on Archæology by a Mormon elder is a curiosity and a surprise. A surprise because of the extent of the reading which is exhibited by it, and a curiosity because of the position the author takes. The position reached is that the lost tribes of Israel came to America, and the descendants of Abraham and of Noah are to be found in this country as the prehistoric inhabitants. Of course the conclusion which a Mormon would draw would be that the tablets and other tokens, which have come down to us from prehistoric times, contain not only history but revelation. It is a singular fact that Prof. Seyffarth, who was not a Mormon, interpreted the Davenport tablets as representing Noah and his family; and others who do not believe in their genuineness have maintained that these tablets were planted by Mormons. The author of this book is not responsible for these coincidences, for he seems to be sincere and no doubt believes what he has

written; at least there is an air of candor about the book which would lead one to that conclusion; still there is a lack of discriminating and critical judgment that might result in self-deception. Wyrick a number of years ago exhumed a stone from a mound in Ohio, covered with Hebrew letters. Archæologists have universally pronounced the stone a fraud. The author of this book considers it genuine. He says the science of archæology is not complete without this "keystone." Wyrick builded better than he knew. The author says also that "the flood legend is sculptured on the great calendar stone in the City of Mexico," and quotes Delafield and Kingsborough to show the similarity between the bible stories and ancient Mexican picture writing. He also quotes Brasseur de Bourbourg, Ignatius Donnelly, Rafinesque and Dr. Le Plongeon, who says "the Maya is not devoid of words from the Assyrian." Rudolph Falb, a German professor, says that the Aymara language, spoken by eight villages in Peru, bears near affinity to the Semitic tongue. A chapter is given to the wanderings of the lost tribes. He says we are compelled to try to trace the covenant race through all its vicissitudes to see what shall befall them in the latter day. He speaks in another chapter of a chart of the wanderings of the Aztecs, furnished by Delafield, and refers to a kneeling figure in the chart with tears rolling from his eyes, and says this proves that the leader was guided by inspiration, the old world imagery, the leaning mountain, the tree of knowledge, etc., the cross and the pyramid he recognizes in America. These are the conclusions of the book, filling up six chapters, from the twelfth to the eighteenth. In all the previous chapters the author is gradually approaching the subject, and he does so in a very adroit manner, as will be seen by the table of contents, which is as follows: First, origin of all things; second, world's history; next, the cradle land, the winter of the world, which means the glacial era; the deluge tablets, Ararat, Babel, Beni Noah, the Noachidae in America. In some things the author has taken the scientific view, as for instance, when he says that the tower of Babel was built for worship, was a reproduction of the mystical mountain of the assembly of the stars, the Hormazd of the Isaiah. He quotes also the opinion of learned writers and says the weightier part of the world of learning is in favor of Pamir's high plain, Central Asia, as the only starting place of the nations; but he quotes Prof. Valentini to show the similarity of the names of five cities of Ararat to five names of ancient places in Mexico. He says: "If the traditions of the flood, had all been obliterated a nearly full account could have been made up from American sources." He maintains that Melchizedec had the true faith, but he quotes Lenormant as holding the opinion that man existed in the miocene age, not as a savage, but as a gifted being, and that the savagery of later races was the result of a divine curse. It is plain that the author's views of the legend have given a tinge to his views, and that he wears blue spectacles in all his wanderings through the fields of science. There is a lesson in all this. In the first place, those who think they know all about science and are so sure that it confirms the preconceived view will be surprised when they look at this travesty; but those who think, on the other hand, that Mormonism is nothing but a system of willful imposture will find out the various ways by which certain persons may deceive themselves. This book comes to hand without any publisher's name or date. We are at a loss to account for it, except that the author has published it at his own ex-

pense; perhaps with the idea that it would be used to more effect if there was no name or place on the title page. The proof-reading is execrable, but perhaps a western printing house is to blame for this as much as the author.

*Race and Language*, edited by HORATIO HALE. Reprint from *Popular Science Monthly*.

Mr. Hale says: "Many scholars have sought to find in language the basis of the natural classification of men. Their attempts have thus far been frustrated, by various causes." He thinks, however, that the basis can be established, and that America offers a fine field for the study. He refers to Gallatin, Hayden, Powell, Powers, Stoll, and Gatschet, as proving that the linguistic classification furnishes the only scientific basis. He refers to the customs, the method of building houses, their religious beliefs and myths, as furnishing poor tests for classification, as very similar myths and methods are found among all the tribes. Language varies little through the influence of climate, while physical characteristics, color, hair, stature, etc., vary widely. He speaks of the river drift men, cave men, lake dwellers, mound-builders, cliff-dwellers, as exceptions, but thinks that all other races can be classified according to their languages. In this he takes issue with Major Powell, who says: "There is no science of ethnology; for the attempt to classify mankind in groups has failed on every hand; neither the shape of the skull, color of the skin, or even the hair, furnish a basis of classification." The negative and the positive poles are necessary to an electric current, and so to the stream of thought. Major Powell furnishes the negative, and Mr. Hale the positive side of this question. Honor is due to any man who will work out this problem and furnish any basis as an approximate test for all races.

*Comparative Phonology of four Siouan Languages*.—By REV. J. O. DORSEY, Washington, D. C.

The languages of the Siouan family are seven stocks, two of which have four dialects, and four two dialects. The dialects are as follows: (1) Santee, Yankton, Teton, Assinaboin. (2) Ponka, Kansas, Osage, and Quappia. (3) Iowas and Missouris. (4) Winnebago. (5) Mandan. (6) Hidatsa. (7) Tutelo. The Tutelos are with the Six Nations in Canada. One object of this little pamphlet is to illustrate the sound shifting prevalent among the different tribes as mda, bca, bla, dca, pra, para, are all found in the different dialects, but meaning the same thing. Mr. Dorsey is wonderfully well qualified to treat on this subject, as he is thoroughly acquainted with the language and all its dialects.

*Perforated Stones from California*—By HENRY W. HENSHAW, Washington, D. C.

Dr. Stephen Bowers discovered, in 1885, in a cave in Santa Barbara county a number of relics, consisting of baskets, painted sticks, feather head-dresses, bone whistles and perforated disks, mounted on handles. These disks are described by Henry W. Henshaw, and compared with others from the same region, and their uses are speculated upon by him: 1st, As weights to digging sticks; 2nd, as gaming implements; 3d, as dies for fashioning tubes; 4th, as spindle whorls; 5th, as club heads; and 6th, as ceremonial staves. The last seems to be the most plausible, and yet the discovery by Dr. Bowers would seem to indicate that they were sometimes used as ham-



mers or club heads. It is probable that the find was a kit of tools or an outfit of a company of medicine men. The head-dresses were made from feathers and varied from two to five feet in length.

*The Use of Gold and Other Metals Among the Ancient Inhabitants of Chiriqui.*

*Isthmus of Darien*—By WM. H. HOLMES, Washington, D. C.

The province of Chiriqui is connected with both North and South America, as it is on the Isthmus of Darien. Its archaeology also forms a connecting link. Mr. E. G. Barney, in his articles to *THE AMERICAN ANTIQUARIAN*, Vol. V., has spoken of the gold ornaments which were common in the United States of Colombia. These gold ornaments which were exhumed from ancient graves in Chiriqui are similar. They are mainly imitations of the human form, but occasionally in the shape of quadrupeds and birds. They are all very grotesque, reminding us of the grotesque figures of the Japanese. Mr. J. A. McNeil has examined many thousands of cemeteries and has deposited the greater part of his collection in the National Museum. The ornaments are found in a small percentage of the graves. The great majority of the graves contain none whatever. Mr. Wm. H. Holmes has used his pen and his pencil to good advantage. He has skill as a draftsman and excellent descriptive powers. There is no doubt that many of these gold ornaments were used as Phallic symbols and were worn as amulets. In one case the serpent is seen to protrude from the ears and from the thighs, and the genitals are in the shape of serpents' heads. The superstition about the evil eye led to the wearing of Phallic ornaments in Europe, and it is possible that the same superstition prevailed in America.

*Sepulchral Literature*—By JOHN TOWNSHEND. Privately published.

This book reminds us of an elegant hearse with waving plumes; it is bound in black—symbol of the abode of the dead. The question is whether cremation will dismiss the hearse. Ashes and urns may be cheerful emblems to some, as cheerful as the boat and the ark were to the ancients. Is there not some way of transporting bodies over the water as the Egyptians did? The bibliography of burials is the theme of the book. The author deserves credit for his patience in collecting and examining authorities on the subject.

*The Works of H. H. Bancroft, Vol. XXXVII., Popular Tribunals, Vol. II.*

The History Company, Publishers, San Francisco.

Mr. Bancroft is proceeding with his *Encyclopedia of History*. He has taken up the history of Mexico, of Oregon and of California, and has reached a modern date in history. The struggle between the lawless class and the order-loving people during the early settlement of California is the subject of this volume. Many, at that time, wondered whether society would ever settle down to a peaceful and civilized condition, the tendency to barbarism was so great. Marvelous changes have taken place in California. This is encouraging, for it leads us to believe that cities on the frontiers, where crime is upheld and the courts of justice are made to defend iniquity, will ultimately change, and the better class of people will rule. There is danger that the same state of things may come upon other parts of our country. But a few determined spirits may revolutionize society. This is what we want in America at the present time. There is an inspiration in the book which we think will do good when it is used.

THE  
*American Antiquarian.*

---

VOL. X.

*Part 48*

MAY, 1888.

No. 3.

---

THE CIRCLE AS A SUN SYMBOL.

In our previous paper we spoke of sun worship and described some of the symbols which were used. Among these symbols we found the circle, the globe, and the winged orb to be very common. These were frequently associated with animal figures, and so we there dwelt upon the combined symbol. In the present paper we propose to speak of the circle alone, and to consider it as a sun symbol. We shall find that it was the chief emblem of sun worship; that it was embodied in many specimens of art, and was often a type after which architectural structures were modeled. The architectural structures will, however, engage our chief attention. We have already spoken of the calendar stones, of the shell gorgets and other specimens of art. In these we found images of the sun, and where images were not seen, the circles are supposed to represent the sun. These specimens show how extensive sun worship was. They show that the Mound-builders of the Mississippi valley, the Pueblos of the great plateau and the civilized races of the southwest were all sun worshipers. There are also architectural structures which illustrate the same fact, and to these we shall call attention. The specimens of art might be designed as mere ornaments and in the sun symbols there might be conventional figures which had been introduced by the fancy of the artists; but the architectural structures are so massive and so elaborate as to show that a motive stronger than mere fancy must have ruled in their erection. In this respect sun worship may be compared to serpent worship.

The ancients sometimes used the serpent as an ornament in art, but they also embodied it in their architecture. This was especially the case in America. Here the serpent frequently appears, its massive folds stretching across the facades of temples, its huge jaws projecting as guards to the stairways which

ascended the pyramids, and its body serving as a bannister on either side of the stairway. The serpent was also placed as a protection to certain enclosures among the Mound-builders, its form being embodied in the earth walls and its head forming the guard to the entrance of the enclosure. This use of the serpent as a symbol and this embodiment of it in architectural structures is suggestive.

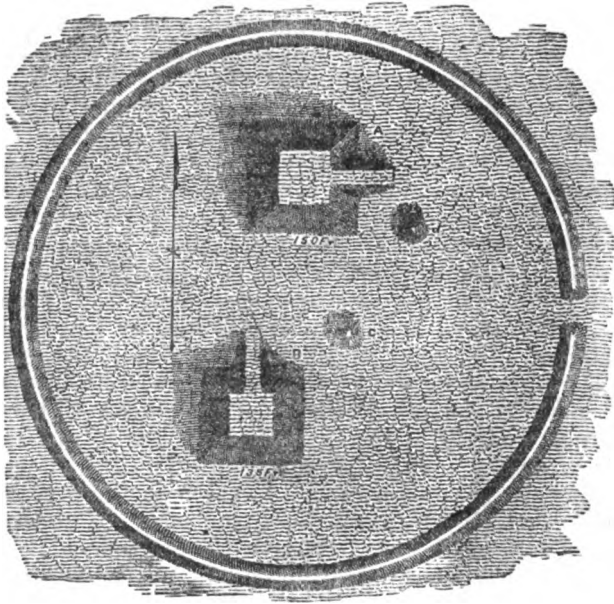
If the double serpent could be imitated in the massive walls of an earth circle, its tail represented by massive stone piles, and its curved necks could serve as the guard to the entrance way of the enclosure, as was the case with the earthwork near Chillicothe in Ohio, then we should say that a circle might also be equally significant. Before proceeding with the subject, however, we shall consider the question whether architectural structures were ever used as symbols of the sun. In reference to this point we may say that there are many structures which were devoted to sun worship, as, for instance, the pyramid, the obelisk, the many-columned shrine, the terraced temples, the many-storied sculptured caves, as well as the stone circles and the conical towers. These were all devoted to sun worship in the east, and some of them are also found in the western continent. Any one who has read Ferguson's "History of Architecture," Rebers' "History of Art," Maurice's "Indian Antiquities," or any of the common books on the art and architecture of the east, will see this. There are, however, certain other symbols which have been embodied in architecture which are not so plain, and concerning which there may be some honest doubt. It is well known that the cross was embodied in art and in architecture long before the days of Christ. It was a symbol associated with sun worship before it became the symbol of Christianity, and must be so regarded whenever it is found in prehistoric structures. The horse-shoe was also a symbol of the sun. This, to be sure, was also a phallic symbol and was often set opposite to the obelisk or standing stone; yet the two were frequently associated with sun worship. The sun was the great producer and generator, so the obelisk and the horse-shoe were used as symbols of its productive force. The serpent also was a symbol of the sun, or at least a symbol of a nature power, and so was associated with sun worship.

The circle was, however, the chief symbol. It is the simplest and the most significant of all symbols, and we therefore might expect it to be often used. The question is: "Was it so used in architecture?" We maintain that it was, and shall endeavor to show some of the cases where it was used as a sun symbol.

I. Let us consider first the structures devoted to sun worship. It is noticeable that many sun symbols are found in the architecture of America. There are pyramids in this country as well as in Egypt and Assyria. The "pyramidal mounds"

found in the gulf states were used by sun worshipers. The explorers who attended Ferdinand De Soto in his expedition, described the chiefs as standing upon these pyramids and offering their salutes to the sun. They turned first to the east, the west, the north, and south, whiffed the tobacco smoke from each of their sacred pipes to all points of the compass, and then lifted their pipes toward the sun. The ancient Pueblos stood as the Zunis to this day stand, on the terraces of their pyramidal houses, and saluted the sun every morning at its rising. Offerings to the sun were made on the pyramids of Mexico, and thousands of human victims were slain as sacrifices. Pyramids abound in the ancient cities of Central and South America, and there is no doubt that sacrifices were offered to the sun on them. The "circle" does not seem to be common in any of these regions. There are very few architectural structures in circular form, although there are many specimens of art in which the circle is a conspicuous symbol. The circle as an architectural structure seems to be confined to the regions farther north. Animal worship prevailed among the wild hunters; sun worship prevailed among the agricultural tribes; architectural forms, so far as they could be, were made to serve as symbols of the different kinds of worship. We find animal figures inscribed upon the rock, sculptured into stone, painted upon grave posts, and wrought into massive emblematic mounds. There are, however, earthworks in which animal figures are contained within circles, also other earthworks in which the circle is contained within the body of the animal, as is the case in the great serpent in Adams County. This shows a transition from animal worship to sun worship, as other tokens show a transition from the hunter life to the agricultural state. We call attention to the geographical location of these structures and the line which separated the two classes. The sun worshipers evidently had their habitat in the gulf states, and used the pyramid or the pyramidal mound as the structure which was devoted to that cult. The animal-worshipping tribes had their habitat along the chain of the great lakes, especially in Wisconsin and in Ohio. There was a region, however, in which there seems to have been a transition from animal worship to sun worship. It was situated along the Ohio river. There are circular enclosures on this river which can be best explained on this theory. This would give us three divisions of the Mound-builders, that is, if we regard the mounds as symbols of religion. There is also the same division of tribes or races in the western part of the continent. In Washington Territory, Puget Sound, Oregon, and the northwest coast there are many structures devoted to animal worship, such as totem posts and genealogical trees. In Colorado, Arizona and New Mexico there are structures which were devoted to sun worship, such as the terraced pyramids and the estufas. In Mexico

and the Gulf States the architectural structures were also sacred to the sun. See Fig. 1. Here the pyramid and the obelisk were common. The circle does not appear in any of these regions except in the region where Mound-Builders Pueblos and Cliff-dwellers had their abode. Here it would seem to be a symbol of the sun, as it was in the Ohio valley. The highest development of sun worship was farther to the south and southwest. But the beginning of the cult is apparent. We should say that the circle as an architectural structure marked the lower stages of sun worship, while the pyramid marked the highest stages. It was among the civilized tribes that the sun symbol is found



*Fig. 1.—Circle and Pyramid in Georgia.*

in all its completeness. The circle was regarded as a symbol of the sun. This was the case in the older countries. We find the pyramid, the cross, the obelisk, were used as sun symbols among the civilized races of the east, but among the uncivilized tribes, such as formerly lived in Great Britain, Norway and Sweden, the circle was the symbol.

There are many analogies between the geographical location of the different symbolic structures in the old world and the new.

The Druidical circles in Great Britain correspond to the earth circles in Ohio and to the "circular towers" in Colorado and New Mexico. This type of sun symbols seems to be con

fined to the temperate zone, although there are traces of it in Carthage and Asia Minor. The pyramid, on the other hand, is a structure which is seen more extensively in the torrid zone. Why this is so we do not undertake to explain, but merely state the fact. The pyramids of Egypt, of Chaldea, of India, of Mexico, and Central America are all in the same belt of latitude, just above or just below the Tropic of Cancer.

Mr. H. H. Bancroft has speculated a little on this subject. He says: "Wherever man is most in harmony with nature there he progresses most rapidly. Those physical conditions which, when favorable, give to their possessors wealth and leisure, are the inevitable precursors of culture. It remains yet to be proved that one nation is primarily or inherently inferior or superior to another."

II. We next take up the different 'places where the circle is found. We maintain that it was a sun symbol in all of these places.

(1) We first call attention to the circle as an architectural symbol, in Great Britain, Norway and Sweden. The great circle at Avebury has been referred to in connection with serpent worship. It was, however, a sun symbol. The serpent was found in the covered way or line of standing stones, but the sun symbol is found in the circle. Avebury has often been described. Stukely was the first. He has been quoted by Maurice, Jennings and many others. These authors may be regarded by some as out of date. Dr. A. H. Sayce, in a letter to the writer, says: "The current view now as to Stone-Henge and Avebury is, that they are the monuments of a pre-historic 'brachycephalic' people of the Stone Age, and were erected for sepulchral purposes, like similar megalithic structures among certain aboriginal tribes in India at the present day. Stone-Henge, however, seems to belong to two different periods, the inner circle to the Stone Age, the outer circle, the stones of which were brought from Wales, to the Bronze Age. Whatever might have been the object for which the inner circle was originally erected, it is difficult to suppose that it was not used for religious purposes when the outer circle was added." With this concession from so eminent authority, we feel warranted in quoting from the old writers.

Avebury, when perfect, Sir John Lubbock says, consisted of a circular ditch and embankment, containing an area of  $28\frac{1}{2}$  acres; inside the ditch was a circle of great stones, and within this, again, two smaller circles formed by a double row of smaller stones, standing side by side. See Fig. 2. From the outer embankment started two long winding avenues of stones, one of which went in the direction of Beckhampton, and the other in that of Kennet, where it ended in another circle. Stukely supposed that the idea of the whole was that of a snake

transmitted through a circle; the Kennet circle representing the head, the Beckhampton avenue the tail. Midway between the two stood Silbury Hill, the largest artificial mound in Great Britain, measuring no less than 170 feet in height. The area of

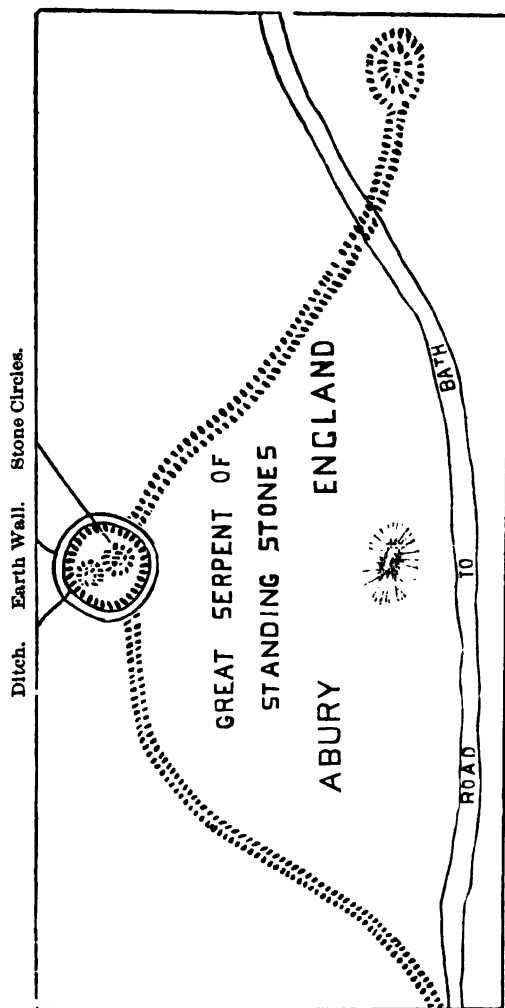


Fig. 2—Works at Avebury.

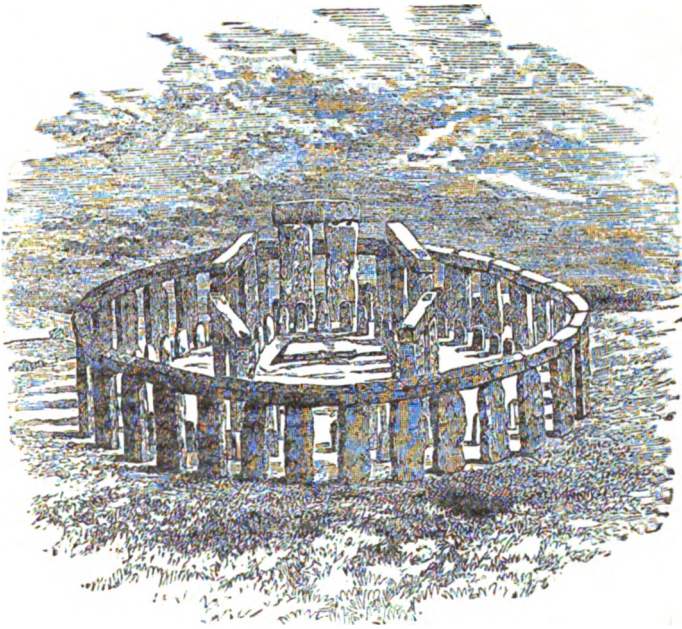
been embodied in the works at Avebury.

(2.) Stone-Henge is another structure which may be regarded as devoted to sun worship. It stands in the middle of a fine flat area, near the summit of a hill, and is enclosed with a double bank and ditch, nearly thirty feet broad. The whole

the enclosure was about  $28\frac{1}{2}$  acres. This was a temple of no inconsiderable size. It was of course in ruins when the earliest account of it was written, and we can only speculate as to the lapse of time since it was venerated as a place of worship.\* Here we have the symbols of the sun closely associated. The circle and the rude pyramid, at the same time, we have a symbol of the serpent. It appears that sun worship and serpent worship were closely associated, and yet they may have been one. The circle may have been a symbol of the sun and the serpent a nature power, and the pyramid may have been the place where rites were celebrated. This association of the circle with the serpent is worthy of notice. The phallic symbol or horse-shoe is supposed also to have

\*See Lubbock's *Prehistoric Times*, page 119.

forms a circle nearly 138 feet in diameter, consisting when entire of 60 stones, 30 upright and 30 imposts. These stones are from 13 to 20 feet high. The lesser circle is somewhat more than 8 feet from the outer one and consists of 40 lesser stones. The "adytum," or inner cell, is an oval formed of ten stones in pairs with imposts, rising as they go around to the height of 30 feet, each pair separate. Within these are 19 more smaller stones, of which only 6 are standing. At one end of the "adytum" is an altar—a large slab of blue coarse marble, 16 feet long and 4 broad. There are three entrances from the plain to the structure, and at each of them were raised, on the



*Fig. 3—Stone-Henge.*

outside of the trench, two huge stones, with two smaller stones within the trench parallel to them. The avenues to Stone Henge are composed of a raised or graded way between two ditches, 350 feet asunder, one of them 1700 feet long; the other was supposed to have been nearly two miles long. Mr. W. F. Maurice has described the symbolism of the structure. (1) It is circular, as all ancient temples to the sun were. (2) The adytum is oval, representing the mundane egg. See Fig. 3.\* (3) The grand entrances and avenues were symbolic, as those at Avebury were. (4) The number of stones (60) was symbolic

\*NOTE.—The cut represents Stone Henge as restored. We do not vouch for the accuracy of this restoration, but present the figure as illustrating the general opinion which has prevailed about the works.



of the cycle. The number of the stones of the inner circle (19) was also symbolic. (5) The temple was uncovered, proving that it resembled the temples of the ancient Persians. He also compares Stone-Henge to the circular temple at Rollrich, which was of the same size, and had the same number of standing stones, which he calls the Druids' wheel or circle. He dwells also upon the comparison between Stone-Henge and Avebury, which consisted of two concentric circles; one containing 30 stones and the other 12, one of which had a single stone or obelisk in its center, and the other contained an altar like that at Stone-Henge. The remarkable numbers 100, 60, 30, constantly occurring, unavoidably bring to our recollection the great periods of astronomy, the century, the sothic cycle, the thirty years or thirty days, the twelve signs of the zodiac. Five is the multiple of most of these numbers. Nineteen is also a sacred number. He compares Stone-Henge to the circle at Biscawoon in Cornwall, a circular temple, consisting of 19 stones, distant from each other 12 feet, having another in the center much higher than the rest. He says: "All circular monuments, but especially those consisting of columnal stones, were meant either as representatives or disks of the sun, or of the revolution of this orb, through the twelve signs of the zodiac." He says: "Druids not less than the Brahmins adored the sun in a circular dance, and that the Gauls imitated the course of the sun by turning the body around while engaged in their devotions; that the Phœnicians made their children pass through the fire and worship the sun under the title of Moloch." The Druids celebrated their solemnities at the solstices. The arch Druid, arrayed in stole of virgin white, with the sacred "anguinum," or Druid egg, suspended around his neck, with the mystic rod or staff in one hand and the all-healing mistletoe in the other, sacrificed human victims, under the shadow of the great oaks." The Druids introduced the Scythic religion into Great Britain. It is possible that the same Scythic race migrated to this continent and introduced a similar system, which has been perpetuated by the circles found among the mounds. There may be much that is fanciful in these analogies, yet the mention of the sacred numbers and the interpretation of the symbols may assist us in understanding the significance of the circles in this country.

Sir John Lubbock says: "There remain overwhelming proofs of an important and extended commerce in even more ancient times than those of Pythias or Himilco. We are therefore quite justified in concluding that between B. C. 1500 and B. C. 1200, the Phœnicians were acquainted with the mineral fields of Spain and Great Britain. The great stones in tumuli are very seldom attributed to the Bronze Age, are very seldom ornamented, but there are a few exceptions; one of them being the remarkable monument near Kivik in Christianstad. On

one of these, an obelisk is represented which Professor Niels-son regards as symbolical of the sun god, and it is certainly remarkable that in an ancient ruin in Malta a somewhat similar obelisk was discovered. We know also that in many countries Baal, the god of the Phœnicians, was worshiped under the form of a conical stone. Professor Nilsson finds traces of Baal worship in Scandinavia. The festival of Baal or Balder was celebrated on a midsummer's night in Skania and far up into Norway until within the last fifty years. A wood fire was made upon a hill or mountain and the people of the neighborhood gathered together in order, like Baal's prophet of old, to dance around it, shouting and singing. It is possible that the mounds with the circles surrounding them were used for the same purpose\*

III. We now call attention to the analogies between these circles in Great Britain, at Avebury and the earth circles in the United States of America—first, to the size and situation of the enclosures, and next to the symbolism contained in them.

Mr. E. G. Squier has described the earth circles in Ohio. Many of these contain an area of  $27\frac{1}{2}$  or 28 acres, and are attended with a wall or ditch very similar to those at Avebury. There are no standing stones as in the circles of Great Britain. As a substitute for these, however, we have at times a series of circles with a mound in the center which was evidently designed to be symbolic, at least we can give no explanation of the circles unless this was the purpose. The frequent occurrence of symbols such as the obelisk, the pyramid, the circle, show that sun worship extended over many countries and there is no reason to disbelieve its transmission to this country.

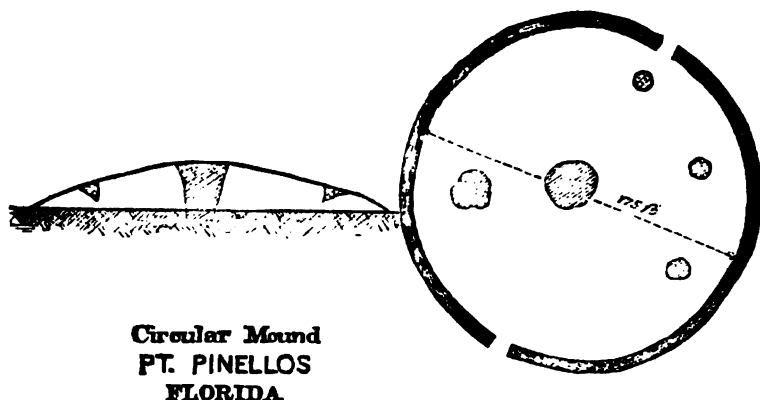
We do not claim a Phœnician or Druidical origin for sun worship in Ohio, and yet we call attention to the analogies of the structures existing in Great Britain and the United States. How do we account for it that circles are so common in the prehistoric works of both countries? The circular enclosures which are found in Great Britain are generally supposed to have been devoted to sun worship. How is it with those found in the United States? Some of these may be mere defenses, the remains of old stockades, which were circular in form for the sake of convenience and better adapted to the shape of the ground; but this cannot be said of all. The forts of the Indians were sometimes circular. To them must be ascribed the majority of those earth circles which are found in the state of New York, toward the north part of the state of Ohio, in Michigan and other places near the chain of the great lakes.

---

\*See Fig. II, Lubbock's Prehistoric Times, page 72.

NOTE.—In Scandinavia the gods were worshiped partly in the open air, in groves, on places encompassed by a circle of big stones. It was more honorable for men to fight by sword than to quarrel by tongue. After challenging one another to a duel, they met on a place surrounded by a circle of big stones. Lindberg's History of Scandinavia, pp. 25-30.

For these we do not claim symbolism. There are, however, circular structures elsewhere which were probably symbolic. Some of these are at the south, in Florida, Georgia, and the gulf states; some in Kentucky and Tennessee. We call attention to a circular earthwork in Florida and another in Georgia. See Figs. 1 and 4. It will be noticed that one of these has two



**Circular Mound  
FT. PINELLOS  
FLORIDA**  
*Note. The dotted perline on  
the figures indicate the  
places where shafts and  
pits were sunk.*

Fig. 4.—Circular enclosure in Florida.

pyramids within it. The pyramids we have seen were sacred to the sun and it seems quite probable that the circle was also. At least there are many circles surrounding the pyramidal

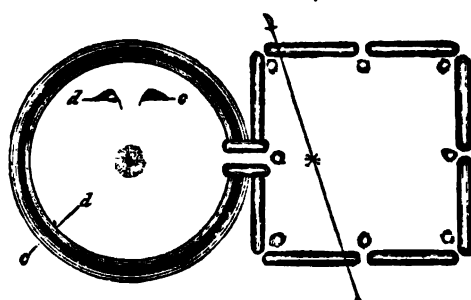


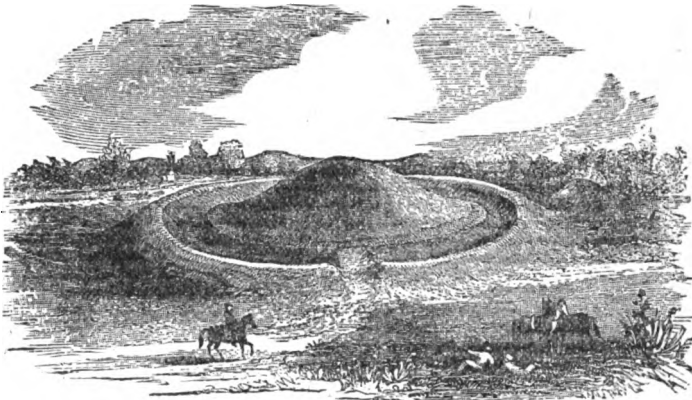
Fig. 5—Works at Circleville.

mounds in the gulf states. The strongest evidence that the circle was used as a sun symbol is the state of Ohio. Here we find striking analogies between the structures of Great Britain and the United States. The analysis and enumeration of the earth-works in which the circle is found will help us see the first point and the description of particular works at Portsmouth will illustrate the second.

First, we call attention to the circle and square. These are very common. See Fig. 5.

These have been always called sacred enclosures and there

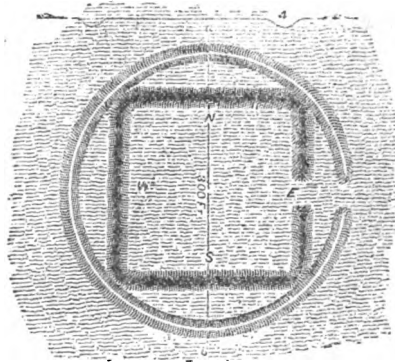
are evidences that they were used as places of worship for the sun. An altar was found in the enclosure at Circleville on which sacrifices were supposed to have been made to the great luminary. A modification of this is found at Marietta, where there are two squares or sacred enclosures with temple platforms in one of them, but the circle is detached and is a mere wall surrounding a high conical mound.



*Fig. 6.—Circle enclosing Conical Mound in Kentucky.*

(2) Next to these should be mentioned crescent-shaped walls, many of which are found in the state, as at Newark, at Hopeton, Chillicothe and elsewhere. Some of these are attached to larger circles as at Hopeton and High Bank. Some of them are mere loops in the walls or side retreats from the covered ways, as at Newark. Some of them are enclosed in a circle. The crescent and circle both serving as a symbolic figure.

(3) A circle enclosing a conical mound is sometimes found. The mound was evidently used for sacrificial purposes, and it seems very probable that the circle was intended as a symbol. See Fig. 6. At times the mound is surrounded by several circular walls as at Portsmouth, and at times the circle will contain a truncated pyramid or a lozenge-shaped mound.



*Fig. 7.—Isolated Circle and Platform.*

(4) Isolated circles with level platforms and ditches on the inside are common. One has the space in the shape of a square. See Fig. 7. One at Portsmouth has an animal effigy;

another at Fredericksburg has three openings or gateways, gradeways, making the figure to resemble a triangle, square and circle combined. Many others are mere circular walls, which once enclosed the round house or sweat house of the Mound-builders. One such may be seen at Madisonville, others at Newark, at High Bank and elsewhere.

The evidence that the figures were symbolic will be next considered.

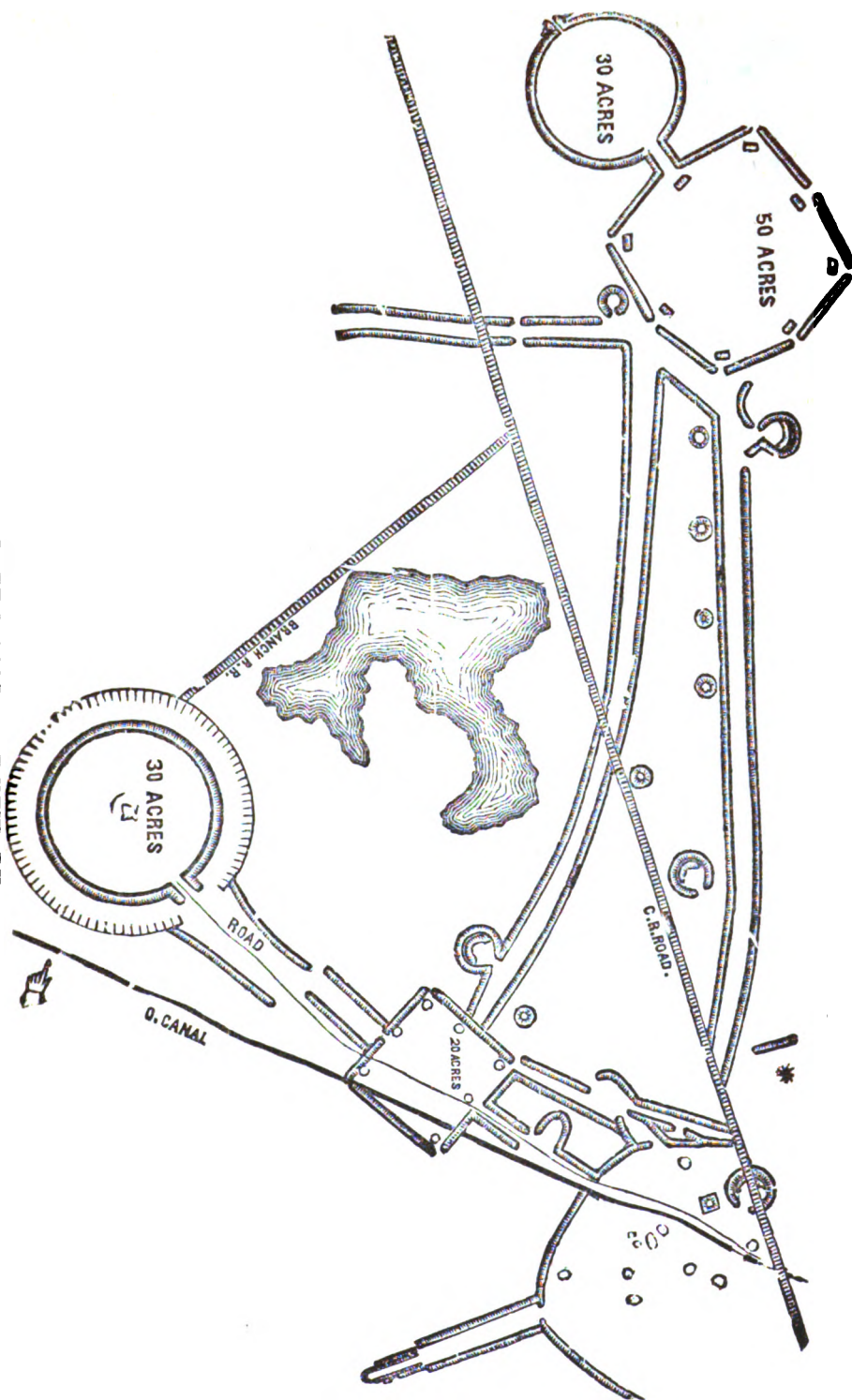
(1) **THE VARIETY AND PERFECTION OF THE FIGURES.** It would seem as if all the figures which could be used as symbols of the sun had been embodied in the earth-works. It is hardly probable that so many shapes would have been devised merely for the sake of convenience. The perfection of the works is another point. The squares are perfect squares, and the circles are perfect circles. In this respect they differ from the works in northern Ohio and New York, to which we have referred.

(2) **THIS UNION of the square and the circle is significant.** No one knows why one enclosure should be square and the other circular, and there seems to be no good reason for it except as the symbolism which was prevalent would require it. Still the custom of building the houses of the chiefs around a hollow square and placing the tents of the common people in the circular enclosure may have prevailed, and this might account for these remarkable figures. It is an explanation which might satisfy some minds, but the circle frequently appears separated from the square and is too conspicuous or prominent to be accounted for in this way. The circle at Newark has a ditch on the inside and has walls which are very massive and lofty, and an entrance-way which is very imposing and like the Propylon before the temples at Egypt, seems to have been made massive and high for the sake of impressing the minds of those who enter. There is a figure of the bird in the center of this enclosure and a crescent near the bird. The wall around this enclosure could not have been built merely for defensive purposes. It is larger and higher than would be necessary for that. It was probably used as a sacred place. See Plate I.

The works at Newark were undoubtedly village enclosures, and yet there seems to have been a symbolism about them, for we can hardly account for the different circles without it. It will be seen from the cut that there are crescents, small circles, as well as the circle and the square. The covered ways may have been designed for religious processions. It has been suggested that the large circles were corrals and the works were designed as a place for ensnaring game. This hardly seems probable.

(3) **THE NUMBER OF THESE ENCLOSURES** is to be considered. There are at least twenty earth-works in southern Ohio which

PLATE I.—WORKS AT NEWARK.



have this remarkable form. Four or five of them in the valley of the Scioto, near the city of Chillicothe, two at Newark, three at Cincinnati, one at Hopeton, another at Highbank, another at Liberty township; these are all uniform in shape. At Marietta there are two square enclosures in which temple platforms may be seen. The circular enclosure is lacking, but a circle surrounds the lookout mound, and so we place this with the other works and call them all sacred enclosures. In Butler county the square and circle are associated, but the circle is on the upper terrace, and the square is on the lower terrace. At Winchester the square is at the mouth of the stream, and the circle a little distance above on the bank of the stream. There are places as at Newark where the double square and circle are connected by long parallel walls or covered ways. There are here many crescent-shaped walls connected with the covered ways. At Highbanks there is a square and circle, four smaller circles, connected by parallel walls. At Paint Creek a number of crescent-shaped enclosures seem to be arranged around an open space as if the intention was to make the spot convenient for observation and, in a sense, safe from intrusion. At Hopeton there are three circles surrounding one square.

(4) THE MEASUREMENTS. These figures, Squier and Davis say, are not only accurate squares and perfect circles, but are in most cases of corresponding dimensions. That is to say, the sides of the squares are each 1080 feet in length, and the diameter of other large and small circles a fraction over 1700 feet and 800 feet respectively. Squier and Davis speaking of the works in Ross county say, "Dunlap's works are lozenge-shaped, but measure 800 feet on each side, and have an avenue 130 feet long. The works at Piketon present a graded way which is 1080 feet long. Many of the smaller circles have a uniform diameter of 300 feet, and many of the larger circles and squares contain an area of 18 and 20 acres. It does not seem probable that the uniformity of measurement could be the result of accident. Col. Chas. Whittlesey and Prof. Ralston Skinner have endeavored to identify the British inch as the unit of measure of the Mound-builders. The point, however, can be pressed beyond what it will bear. There are many coincidences, but they do not prove uniformity of measurement. The regularity of the sides and an approximate unity of measurement are all that are necessary to prove a premeditated design in the shape of the walls and enclosures. If this is granted we should maintain that there was a symbolism in the earth-works. There is, sometimes, a striking regularity about the measurements of these circles. In the case of the terraced pyramid, we have a circular wall 2300 feet in circumference, but in many of the circles of Ohio, the circumference is just half—about 1200 feet, which is the measurement of the great circle at Avebury. There are, however, many smaller circles which are

only half of this distance around, about 560 feet, and others about half of that—280 to 300 feet.

(5) **THE USE OF THE CIRCULAR ENCLOSURES.** It may be objected that the enclosures were all designed for habitation and that no symbolism would be embodied in a structure of that kind. We must remember, however, that religion was a part of the life of this mysterious people. If the circles and crescents surrounded dance grounds, the dances were sacred, and were full of a religious symbolism. If the small circles were used for sweat houses or estufas, as seems quite probable, they also were sacred places. If the large circles and squares were used to protect the houses of the people and of the chiefs, the religious sentiment was not lacking, for the encampment must be always kept in the same shape and every clan and family must find its place in the circle. The smaller circles adjoining the large enclosures contained crescent-shaped walls. These may have been used by the medicine men or prophets or priests. If so, they were symbolic of the sun and moon.

The resemblance between the circle and mound in Ohio and others found in Great Britain will be seen from the cut Fig. 8. This is the burial mound, and it resembles some of the mounds in Ohio and Kentucky, on which cremation rites were performed. It is not probable that sacrifices were made to the sun in both countries.



*Fig. 8.—Burial Mound in Great Britain.*

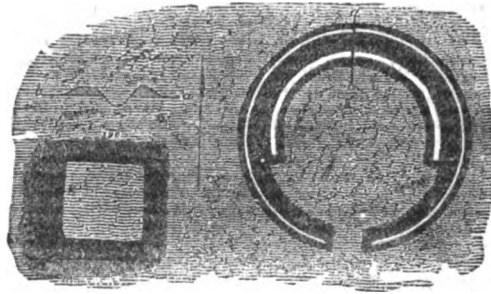
(6) The shape of the mound would indicate symbolism.

We would here call attention to the symbol of the crescent. There are two horse-shoe enclosures within the larger circle at Portsmouth. There are many other semi-circles; some of them at Newark, others at Bourneville, but there are many earth-works in which the crescent is seen connected with the circle. The question is, were these symbolic structures? Mr. Maurice has spoken of the crescent as the symbol of the moon. The Druids in their great festivals wore on their garments or carried in their hands a crescent of gold, silver or other metal. This ornament has long glittered on the banners of the east, the auspicious emblem of rising power and expanding glory; but in that significance the crescent could scarcely be applicable to the sequestered Druids. The use of it, therefore, can only be considered as a custom, originating in a system of astronomical



superstition, like that to which the Brahmins and Druids were devoted, who attended with equal anxiety to the vicissitudes of that orb; and by her motions regulated their most sacred festivals. It was when the moon was "six days old," according to Pliny, that the latter marched in solemn procession to gather the hallowed mistletoe; and it was from that precise period, every thirtieth year, that they began to count anew the months and years which formed their celebrated cycle of that duration."

It is a remarkable fact that the Swiss lake-dwellers used the crescent as a symbol. Dr. Keller has described crescent-shaped pillows of earthenware which he thought were religious emblems of the moon. The crescent is also a symbol among the mounds. There are many earth-works in Ohio, which combine the circle and the crescent in one enclosure. The use of these crescents has not been discovered; but it is supposed by some that they were symbolic; there is one work which has the crescent, the circle and the truncated pyramid combined. The



*Fig. 9.—Circle and Pyramid in Kentucky.*

pyramid is 120 feet square at the base, and 9 feet high. The circle was 90 feet in diameter with the ditch on the inside. It may be that this square was the foundation on which stood a temple, in which case the circle might have been dedicated to religious purposes. See Fig. 9. The truncated pyramid and circle, with an enclosed mound are found associated at Marietta, Ohio, and it is supposed by some, that these were places of worship. The temples were placed on the platforms, but the fires to the sun were lighted on the conical mound, the whole series of works having been used for religious purposes. This supposition, that the works in Ohio were sacred enclosures, and that they contained sun symbols, was advanced by E. G. Squier, many years ago. It has not been controverted although there has arisen a kind of skepticism which has kept the students of archæology from advocating the theory or advancing any thought in connection with it.

The resemblance between the earth-works and the rock sculpture is noticeable. We have already spoken of the resem-

blance between the so-called Druid circles in Great Britain and those in America, but here is a sun symbol that is more extensive still.

The circle and the crescent are found associated in many religious structures in this country. The crescent is found in the

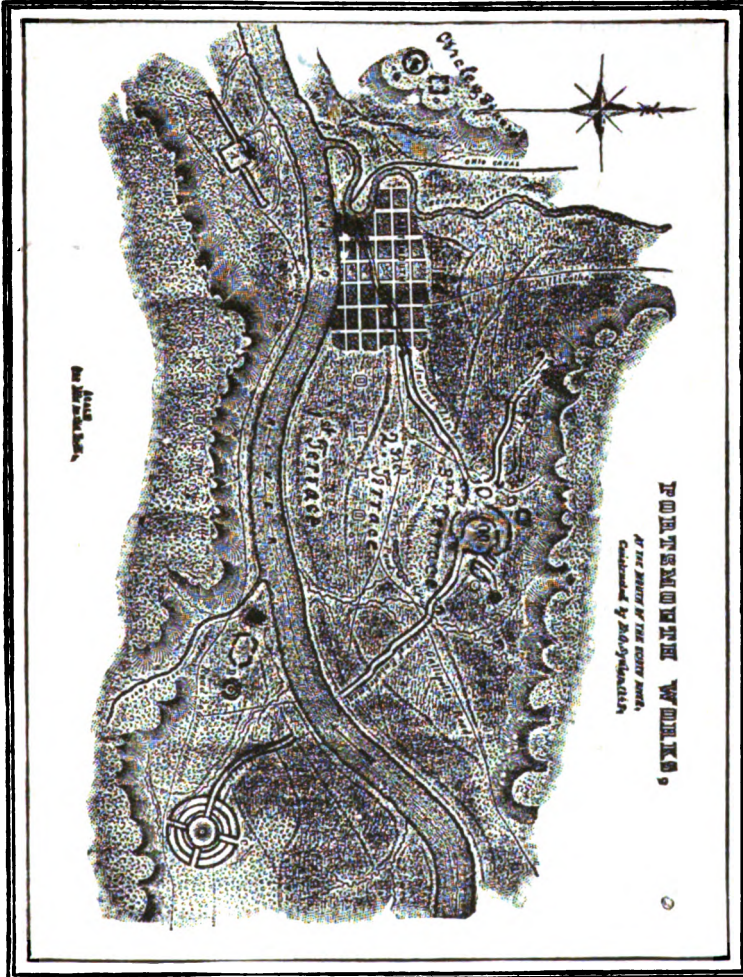


Fig. 10—Works at Portsmouth.

works at Ft. Ancient. A mound in the shape of a crescent formerly existed there. It stood near the entrance to the large enclosure. This symbol was associated with the serpent and the horse-shoe in the same works, showing that the people who built Ft. Ancient were devoted to sun worship.

IV. We come to the question of specific location. Is there any place like Stone Henge or Avebury in America?

We claim there is and refer to the works at Portsmouth. Here is a series of earth-works, in which all the symbols which we have enumerated, as being sacred to the sun, are formed, (Fig. 10,) namely the square (A), the square and circle (B), the circle with horsehoe enclosed (C), circle with the high mound enclosed (D), and concentric circles with the open passages like a cross passing through them, (E). All of these are symbols which are repeated many times in the earthworks, and also may be seen incised upon rocks, and engraved upon shell gorgets. The feature, however, which make the works at Portsmouth so resemble those in Great Britain, is the long line of parallel walls or covered way, which has about the same general figures, as the double line of standing stones at Avebury. It is easy to imagine this to represent a huge serpent. The head of this imaginary serpent would be in the concentric circles and enclosed high mound, which is situated upon the Kentucky side and at the upper end of the works. If the circle in the center, on the third terrace, were regarded as a fold of the serpent, then the serpent would be transmitted through a circle, as at Avebury; but this is very doubtful. The square and covered ways opposite the mouth of the Scioto, in any case, would be the tail of the serpent. The walls certainly connected the different parts of the works. They are seven miles long and cross the river twice, that is, they approach the river, and give the idea that a canoe ferry was used for crossing. They do not however go farther than to the first terrace, a fact regarded by some, as proving the extreme antiquity of the works. Whether they were symbolic of the serpent is uncertain, but the works corresponding to the head, certainly resemble the symbol of the cross and circle, and the other works are also symbolic. The horse-shoe is seen in the central circle; here there are two elevated platforms with high banks of earth, surrounding them. These must have been symbolic for no use otherwise can be ascribed to them. There is a wonderful complication to the circles and walls at this point, which can be explained in no other way. The works have, unfortunately, not been explored, so as to ascertain whether there ever was an altar or sacrificial place here; though a hearth and paved channel near it was discovered at one time in one of the mounds, which are situated near the circle and the horse-shoe. The main resemblance, consists in the shape of the covered way and the situation of the large double circle with its enclosed horse-shoe symbols. Every person who has visited these works has been convinced that they were used for religious purposes; and every writer\* has so described them. We consider the works even more interesting than those at Avebury and Stone-Henge, for they con-

---

\*Dr. Hempstead, a resident of Portsmouth, has given a plat and written a description of these works. He regards them as symbolic, as did Mr. T. W. Kinney, the archæologist who formerly resided there.

tained originally more symbols; and the symbols were evidently devoted to sun worship. Some of the figures are isolated, but every one of them has a symbolic shape. There is a figure near the central circle, which has been by some interpreted as a serpent. There is a circle on the west side of the Scioto River, which contains the effigy of an animal. There are three figures at (D), near the concentric circles, which resembles the southern chunky yards and accompanying towers, structures which were there devoted to sun-worship. There are also remarkable circles near the enclosure (A), which were undoubtedly symbols of the sun. It is unfortunate that these works could not have been examined more thoroughly before they were destroyed. We regard them as symbols, among which the circle is the most numerous, six or eight circles being found in this locality. The walls, however, are the most interesting parts of the works.

We can imagine processions moving from one extremity of this long protected path or road, to the other, beginning on one side of the river, crossing the water by ferries of canoes, marching along the level terraces, then ascending to the third terrace, where was the great circle. Here perhaps was the temple and the place of sacrifice. From this point the procession would march to the east, cross the river again, reach the triple circle within which was the conical mound. Here perhaps would be the cremation and final burial in the mounds near by. Human sacrifices may have been as common here as among the Druids of Great Britain. The symbolism exhibited by the works would suggest this. Here were sacrifices to the sun. A strange blending of serpent worship and sun worship; the "horse-shoe" being also a prominent symbol in the system of works. It was a wild scene in which the beauties of nature were overshadowed by the cruelties of man; the luminary above seemed to demand these sacrifices from its worshipers.

Mr. Maurice has spoken of this. The sun that illuminates seems to govern the world. The name of Baal and Bel was equally applied to both the monarch and the orb. The sacred fires in honor of Belus once flamed over the whole island. "On May eve the Druids made prodigious fires on these 'cairns,' which being every one in sight of some other could not but afford a glorious show over a whole nation."\* This same may have been true of the early inhabitants of Ohio. There are many places where fires, if lighted up, would illuminate the whole region, and it is not certain but that from these circles at Portsmouth there could be sent up signals, which would be responded to from the circles at Chillicothe, and from these the lighted fires would signal other places, until the altar contained in the circle of the great serpent in Adams county would answer back, and thus a complicated system of signal fires, devoted to sun worship and serpent worship, may have answered to one another over the whole region.

---

\*Maurice's *Indian Antiquities*, vol. VI., page 155.

## NATURE WORSHIP IN ANCIENT AND PREHISTORIC RELIGIONS.

The study of religions in their teaching, doctrine, philosophy, morals, worship, origin, and development properly belongs to science. Religion is a very large and a very important part of the phenomena presented in human life and history. It is the function of science to account for and explain all phenomena by giving their causes, laws and relations. This is demanded by the universal human reason, and it will not be satisfied by anything short of this.

Nature worship has been almost if not quite universal. What was its origin? What were the causes and influences contributing to its growth and development? Was it the first form of religious worship or is it a corruption of a purer form of religion? I think the evidence derived from the study of comparative religions—ancient, historic and prehistoric—preponderates in favor of its being a corruption of the doctrine and worship of an older and purer form of religious faith.

Mr. Tylor says that idolatry is not found among the lowest grade of savages. Idol worship is the product of more advanced culture. He states that it is conspicuous by its absence among many of the lowest tribes. Image worship comes plainly into view toward the upper levels of savagery.\* In the history of the race the spiritual takes precedence of the material. The simple worship of the invisible God comes before idol worship.†

The races of North and South America, of Africa, of Polynesia, recognizing a number of great deities, are usually considered Polytheist, yet under this definition their acknowledgment of a Supreme Creator, as they evidently do, entitles them at the same time to the name of Monotheist.‡ Max Müller|| has shown that fetich worship, or nature worship is not so old as the worship of one God. We find the monotheistic idea among some of those who are placed by ethnologists on the lowest plane of human development, such as the Hottentots and Bush men of South Africa, the negroes of the Gold Coast, the natives of Australia, the Islanders of Polynesia, the inhabitants of Terra del Fuego, the Indians of the Amazon river, the North American Indians, the natives of Andaman island in the bay of Bengal.§

\*Tylor's Primitive Culture, vol. II., p. 157.

†The Philosophy of the Invisible, vol. I., p. 507.

‡Tylor's Primitive Culture, vol. II, p. 311.

§The Origin and Growth of Religion, p. 115.

||Ten Great Religions, by Jas. Freeman Clark, vol. II, p. 148.

Kolben, an extensive traveler and careful investigator, testifies that these tribes and races believe in a Supreme Being.\* Of these African tribes generally Waity, a distinguished anthropologist, speaks thus: "A profounder investigation, such as has recently been made with success by several eminent scholars, leads to the surprising result that several negro tribes, who have not been influenced from the outside have developed their religious ideas so far that we call them monotheists."†

"There is ample evidence," says Max Müller, "to show that the tribes of West Africa believe in a Supreme God, a good Being. The Ashantis call him by the same name as the sky, but mean by it a personal God, who they say created all things and gives all good things. They believe Him omniscient and omnipresent."‡

"The negroes of the Gold Coast," says the missionary, Cruickshank, "believe in a Supreme God, Creator and Governor of the world, calling Him our great friend, or He who made us." Other missionaries confirm this statement, telling us that the negroes speak of God as the old one, as the greatest.||

In the proceedings of the American Philosophical Society there is an article by Dr. Brinton on the Ancient Gods of Central America. He tells us he finds in old documents prayers to the Creator of the world which date back to a time preceding the discovery of America. Some of these he thus translates out of the Maya tongue: Speak his name; honor your father and mother; call him Hurakan, soul of the earth, soul of the sky, Creator, Maker, him who makes us, him who creates us, call on him and salute him. Hail, O Creator and Maker. Thou seest and hearest us. Do not leave us. Do not desert us. O Hurakan, Voc Tepen, Alom. Grand Mother of the Sun, Grand Mother of the Light, hear us, help us.§

The Aztecs had the idea of a Supreme Being, independent and absolute. As they considered him invisible they never represented him by images. They designated him by the name of Teotl (God).¶ The ancient historical religions reveal the same fact. The primitive religion of Egypt was monotheistic. No scholar is better entitled to be heard on this subject than the late Emanuel Rouge, whose matured judgment is as follows:\*\* No one has called in question the fundamental meaning of the principal passages by the help of which we are able to establish what ancient Egypt has taught concerning God, the world and man. I said God, not gods. The first characteristic of the religion is the unity of God most energetically expressed. God,

\*Ten Great Religions, vol. II, p. 148.

†Anthropologie der Natuavolk en.

‡Ten Great Religions, vol. II, p. 149.

§Ten Great Religions, vol. II, p. 149.

¶Quoted in the Ten Great Religions, vol. II., p. 150.

\*\*The Aztecs, Their History, Manners, Customs, p. 109.

\*\*The Religion of Ancient Egypt, by Le Page Renouf, pp. 92, 93.

one, sole and only; no others with him; he is the only being in truth. Thou art one and millions of beings proceed from thee. He has made everything and he alone has not been made. This is the clearest, the simplest and most precise conception that could be presented.

In all ancient Egypt one idea predominates—that of a single and primeval God. Everywhere and always it is one substance, self-existent, and an unapproachable God. M. de Rouge then says that from, or rather before, the beginning of the historical period, the pure monotheistic religion passed through the phase of sabeism; the sun instead of being considered as the symbol of life, was taken as the manifestation of God himself. The second characteristic of religion was a mystery which does honor to the theological intellect of the Egyptians.

God is the self-existent; He is the only being who has not been begotten. Hence the idea of considering Him under two aspects—Father and Son.\* These doctrines were in existence two thousand years before Christ. More than five thousand years ago, in the valley of the Nile, the hymn began to the unity of God and the immortality of the soul.†

In China five thousand years ago, as on the western coast of Africa, the idea of a Supreme Being was associated with the visible heavens. In the languages of western Africa and eastern Asia one word designated God and also the visible heavens. This name was Ti, the personal name of heaven. Shang-ti means the supreme heavens.‡ || Dr. Legge, best authorized to speak on this subject, says: "These characters show us that the religion of the Chinese five thousand years ago was a monotheism;" and he adds that "these two names have kept the monotheistic element prominent in the prevailing religion of China down to the present day. In China, as elsewhere, the goodness and paternity of God has ever been held as indicating the divine will that we should love one another."§

Confucius observed religious ceremonies which fully enough recognized the idea of a supreme personal God. His language is this: "He who offends against heaven, there is none to whom he can pray. But there is a heaven that knows me."¶ These standard authorities show that in the religion of the ancient Egyptians and Chinese the ruling idea was monotheism.

The original Vedic religion was a form of monotheism, but a peculiar one. It was not a monarchical monotheism like that of Greece and Rome wherein one duty is supreme. It was a system in which each of the great powers of nature were alternately

\*Southern Methodist Review, January, 1887, p. 387.

†Ten Great Religions, vol. II, p. 153.

‡Ten Great Religions, vol. II, p. 150.

§The Religions of China, by James Legge, 1883.

¶Laws of Mencius, p. 12.

¶Anelects 3:13, 14:13, Chinese Classics. Translated by James Legge, D. D., p. 9.

deified and made supreme. Varuna, the heavens; Swrya, the sun; Indra, the atmosphere; Agni, fire; and other beings worshipped as the Most High God. Infinite Spirit appears to be embodied in every part of nature."\*

The hymns of the Rig-Veda addressed to Bruna, or the heavens, as universal King, divine, of unbounded knowledge, who has made heaven and earth, who embraces in himself the three worlds, who makes the sun to shine, whose breath is the wind, who makes the rivers to run forever to the sea, whose ordinances are unchangeable, whose messengers go through all world.†

In the religion of the Assyrians and Babylonians, the ordinary titles of Asshur are the General Lord, the King of all the Gods, he who rules supreme over the gods. He is also called occasionally the Father of the Gods.‡ These titles set Asshur apart as supreme, and the one infinite God, Creator and Father. Other gods are worshiped, but as inferior and subordinate, as local gods representing the different forces and powers of nature.

The evidence I have presented shows conclusively that the first form of religion common to men was monotheism, or faith in, and the worship of one God. This faith and worship resulted from the natural and direct exercise of man's religious nature or faith faculty, the function of which is, according to Max Müller, to perceive or cognize the infinite. Polytheism has grown up around, or been grafted upon this earlier faith as the result of religious speculation.

Man wanted a visible symbol of the invisible God, and in this way nature worship sprang up. Nature is the manifestation of God, and at first man so understood and used it in his religion. They worship nature as the visible symbol, and manifestation of one infinite God, just as scientists study nature as revealing the unknown cause of all phenomena.

WILLIAM TUCKER.

Mt. Gilead, Ohio.

---

\*Ten Great Religions, vol. II., p. 151.

†See Muir's Sanskrit Texts, Second Edition, vol. I.

‡Ancient Religions, p. 38. Ancient Monarchies, vol. II., p. 501.



## EPITOME OF PREHISTORIC ARCHÆOLOGY IN WEST-ERN EUROPE.

### FOURTH PAPER.

#### MAN IN THE TERTIARY PERIOD.

The belief in the existence of man in the tertiary period, as well as public or general interest in the subject, are greater in Europe than in the United States.

The tertiary period is remarkable for the size of its plants and animals. There seemed to be an increase in the efforts of nature and a corresponding increase in the size of her products. New species appeared, larger than any before, to be succeeded by others still larger. They increased in size until they reached their limit and decline, died out as a species, passed away, and we find them now as fossils. We also find man as a fossil, and the contention is whether he is as old a fossil as the animals mentioned. It is certain that he was on earth during the succeeding—the quaternary—period, but does his appearance date back to the tertiary period? That is the question over which there has been so much discussion. For my own part, I see nothing improbable in its being so, but opinions do not count; what is demanded are the facts to prove it. The negative must triumph until the affirmative is proved.

The subject divides itself into two questions: 1. Does the evidence adduced relate really to man or to some other animal? 2. Conceding it to relate to man, to what geologic period does it belong—tertiary or quaternary? The latter is a question, to be determined by geologists. In the cases that I will cite this question has been determined in the affirmative, though sometimes it has been disputed.

The first question is the only one to be here considered. The evidence adduced may be of two kinds—first, the remains of the man himself. Several cases have occurred wherein this sort of evidence has been found, as alleged. One, the man of Savona, in 1855; one, the debris Lagoa Santa, near Savona, both presented by Professor Arturo Issel, of Genoa; one by Professor Ragazzoni, at Casteneldo, near Brescia. Others have been claimed, but they are not of much prominence. I only mention the Calaveras County (California) skull, to say that others know probably more

of that than I. All faith in its genuineness has, I believe, disappeared in Europe.

The question of the existence of man during the tertiary period in South America has been brought to public attention in Europe by the discussions and investigation of Mr. Soran Hanson and M. de Quatrefages over the discovery of sixteen fossil skulls discovered by Lund, in 1844, in the cavern of Sumidouro in Brazil, and which has lately been extended to neighboring caverns. They were found associated with the remains of extinct animals, which, in Europe, would have been declared to have belonged to the tertiary period. This has raised the ancient disputed question as to the synchronology of the tertiary period in the two hemispheres. MM. Gaudry and de Quatrefages have decided this in the negative, and have announced the general conclusion that tertiary man lived in Europe, but did not in America,

The studying of these questions across the ocean, at arm's length as it were, is highly unsatisfactory, and the opinion of these gentlemen as to facts happening in another part of the world lacks the force it would have if they were nearer to their work. Whatever of scientific interest these discussions may have, practically the question of the existence of man in America during the tertiary period is of small moment until it shall have been satisfactorily determined and generally admitted that man lived in America during the paleolithic age of the quaternary period.

The second sort of evidence is the discovery of the industry or handiwork of man. This consists of the cutting, sawing, scraping, splitting, or otherwise marking, wood, bones, stones, etc., in such manner as to show it to have been the work of man.

Dr. Topinard is authority for the statement that there have been twenty-two discoveries of the alleged tertiary man, and of them the greater part are of this second sort of evidence, but none have been as yet so well marked and satisfactory as to be accepted by the entire scientific world. Cut-wood fossils have been found, the work of which possibly was done by beavers. Fossil bones have been found, split and cut, which have been declared, in the case of land animals, to have been the work of carnivorous animals, and in the case of marine animals, to have been the work of sharks. Prof. Alexandro Portis, paleontologist at Turin, shows a fossil vertebra, pierced by a shark's tooth, which was buried or wedged fast in it. Flints have been found, split sometimes by fire and sometimes otherwise. The contention over these evidences has been great. To give them in detail would require a book instead of a paper. The discussion over the tertiary man began in Paris in the year 1863 by the presentation by M. Desnoyer of his discovery of cut and split bones from Saint Prest; and attracted wide attention at the International Anthropological Congress at Paris in 1867, by the presentation

of the man of Savona by Prof. Issel. It has appeared in the same Congress again and again—at Budapest in 1876, at Paris again in 1878, and at the last session, that at Lisbon in 1880, being the most elaborate. It has been the same with the national associations of Italy and France, the latter at Blois, 1884, and Grenoble, 1885, being notable in this direction. At first the opposition was so fierce and dogmatic, so sure of its ground, so certain that man could not have existed in the tertiary period, that the proponents were snowed under and gave up the discussion. But as attention was attracted and examinations further made, the discussions were renewed at future congresses, and when the fact was developed that the believers in tertiary man had among them those who were equally dogmatic and disputatious, and who could not be silenced by their opponents beating a drum of authority, however large or high sounding it might be.

The disputants divided themselves, as we might suppose they would. Some were unqualified believers. M. de Mortillet was an early believer, but with this qualification: that according to the theory of evolution the man in the tertiary period was not yet man, but, as he calls him, the *précurseur* of man—*anthropopithe*, the "missing link" between man and the monkey.

Some were unqualified opponents of the theory, while others stood midway between the two: they believed it possible, nay probable, that man existed during the tertiary period, but not yet proved. I do not stop to name the chiefs of either party, but will say that the believers are gaining ground in the countries I have named. Disbelievers are joining the middle men, and they in turn the believers. It is a curiosity to be remarked that religious or sectarian beliefs do not enter into this question, for the churchmen and the infidels of France find themselves arrayed in about equal numbers on either side of this question. I could particularize and name a devout Catholic, an ardent Protestant, and a pronounced freethinker arrayed side by side in favor of the existence of tertiary man; and could also find the same combinations opposed.

M. Quatrefages, the Nestor of prehistoric anthropology in France, was for a long time in doubt and preferred to await. The later developments from many countries, Thenay and Puy-Courny in France, Casteneldo in Italy, and Lagoa Santa in Brazil, added to the former evidence, have decided him, and he has now given his adhesion to the theory of tertiary man. See his *Historie Generale des Races Humaines*; also his preface to M. Cartailhac's *Agés Préhistoriques en Espagne et Portugal*, both of which have appeared within the last year.

I belong to the middle class I have mentioned. I admit the entire probability of the existence of man in the tertiary period. I expect it will be proved, but while it remains, and is good, as theory, I cannot accept it as proved fact. I think the testimony

is not yet sufficient to establish the affirmative beyond question. At the same time, I confess that there are some points of evidence if introduced in favor of a less important issue, would be satisfactory proof.

The geologic formation in which have been found flints of Thenay, found by Abbe Bourgeois, of Puy-Courny, found by M. Rames in Portugal, and possibly of Otta, found by M. Ribeera, have been admitted by even the opponents of the theory to the tertiary. They are split, chipped and then worked to an edge by retouching in such manner that if found in any possible connection with the prehistoric man of the paleolithic age, would have been undoubtedly acknowledged without question to have been the handiwork of that man.

The statement or conclusion as to the incisions in the ribs and shoulder-blade of the *Balenotus*, found in the tertiary at Monte Aperto, Italy, and presented by Prof. Capellini, were made by the teeth of the shark, is not satisfying to me. I have examined the originals with attention, and my opinion is that they could not have been so made. The incisions are long, are at all depths, are clean cut on one edge, rough and broken (split out) on the other; they are made in all directions, straight, curved and round. Some have incisions on only one side of the rib, some on both, but no possible relation between them, as there would be if made by a pair of jaws shutting against each other. The shoulder-blade is cut on one side only, and there is no corresponding mark on the opposite side where a jaw could have obtained the purchase for a leverage by which such incisions could have been made. I have gone thus into this subject that I might show in what manner, and by what means, and with what detail the scientists of Europe have investigated it. Much more might be told, but I refrain, adding, however, the hope that this may be the seed which, growing under your fostering care, may so stir up the interest of the public, as that they may keep an open eye for any such evidences as I have mentioned, however slight and unimportant they may at first appear, by which we may develop our knowledge and assure ourselves of the existence or non-existence on the American continent of man in the tertiary period.

#### MAN IN THE QUATERNARY PERIOD.

As the different epochs of the system of M. de Mortillet includes the paleolithic age entire, so my description of his system included the principal features of that age, and but little more need be said of it.

The climate seems to have undergone several changes; at first warm and humid, then cold and humid (this was probably the glacial epoch), then cold and dry, and afterwards temperate and more even.

## 1. What story do the animals of the paleolithic age tell?

The animals of the early part of this age belonged to a warm climate; they were succeeded by those like the cave bear, the hairy mammoth, and the woolly rhinoceros, which could stand cold as well as heat. Then came the reindeer and its like; so there appears to have been a vibration or oscillation of climate and of animals from the Arctic and the Torrid zones, which extended over the country of which I have been speaking. Some of the animals became extinct, but the general balance at the close of the paleolithic age may be stated thus:

<i>Extinct</i> .— <i>Elephas antiquus</i> ; rhinoceros <i>merkii</i> ; mammoth cave bear; m. cave lion; cave tiger, or sable-toothed tiger; hippopotamus; grand marmot; capra <i>primigenius</i> (ancestor of our goat); urus or grand boeuf; roebuck; Irish elk.....	13
<i>South</i> .—Lion, hyena, leopard.....	3
<i>Mountains</i> .—Bouquetin; marmot; white hare; chamois; campagnol des nieges.....	5
<i>North</i> .—Canada deer; reindeer; musk ox; white bear; glutton; hamster; lagomys; aurochs; spermophile(?); saiga (antelope); lemming; blue fox.....	13
While of those belonging to the paleolithic age there remained until historic times.....	31
	65

## RECAPITULATION.

<i>Extinct</i> .....	13
Emigrated to a warmer climate.....	3
Emigrated to a colder climate—mountains.....	5
Emigrated to a colder climate—north.....	13
	18
Remaining.....	31
	65

What produced these changes and emigrations one can only guess.

The disturbing influences of the glaciers, and the great polar sea which invaded and covered Northern Europe have been suggested, but in these respects the knowledge is as yet uncertain and vague, and we must await the decisions of men competent to study and decide such momentous questions.

2. The skull found in a cavern on the little stream Neander, near Dusseldorf, Germany, the original now in the university at Bonn and called the Neanderthal skull stands in the world of science as the representative of the most ancient of the human race as yet discovered, and has given its name to that type. Supposed to have been contemporary with it is the Machaire de Naulette, a human under jaw-bone from the *trou* or cave of Naulette, near Namur, Belgium, found by Mons. Dupont; original at Brussels. This was found in a cavern under five different layers of stalagmite, and at a depth of thirty or more feet.

3. The characteristics of the paleolithic man so far as known: He was short of stature and strong of limb. His bones and

muscles were heavier and stronger than ours. His ribs had large curvatures and show him to have had great lung power. His head was long in proportion to its breadth (dolico-cephalic; index, 72). His under jaw was square and heavy, but his chin sloped backward and under. His teeth were large, with enormous roots. He had three molars side by side, the back ones the largest and strongest. He had a retreating forehead, small in front, but his skull grew extremely large behind, with an estimated capacity equal to many, possibly to the average, of our day.

What became of the paleolithic man? We cannot trace him as we have the animals. We can only surmise and reason—possibly only theorize. I think it most reasonable that he emigrated toward the north with the large proportion and the most useful of the animals of his epoch. There are traces in the past, and correspondences in the present which have induced some learned anthropologists to believe in this theory, and that he passed from the north of Europe over to Asia, through Siberia, crossed the Behring's Straits, and that his descendants now exist as Eskimos. This idea of correspondence has been much strengthened in my mind by the examination of the exhibit of modern and ancient Eskimo implements now being so admirably arranged by Lieut. Bolles, under the direction of Prof. Mason, in the department of ethnology of the National Museum.

I express no opinion about the theory of evolution, but I feel constrained to say that my judgment of the facts leads me to the belief that the human race, the first man, sprang from a single pair, the *locus* being probably Northern Central Asia, from which he spread over the world; that he was then man, and had all his faculties, capacities, and capabilities as he has now. That there has been improvement in the race cannot be doubted, just as there is from childhood to manhood; but I venture the query whether human progress is not by oscillation, compensation, swinging back and forth, as do the heavenly and other natural bodies, other than that upward and onward, that Excelsior of which poets sing and dreamers dream.

The neolithic was that age in which the prehistoric man used principally polished stone implements.

This age was named by M. de Mortillet, and was called generally in France the Epoch Robenhausien, after the station of that name in Lake Pfäffikon, near Zurich, where the polished stone implements have been found without mixture with other ages or civilizations.

#### THE MAN OF THE NEOLITHIC AGE.

He was not indigenous—not the primitive man. He may have come as an invader, driving out the inhabitants of the paleolithic age by war, but we may conjecture that he came as

an immigrant to occupy the land in that peace, and perhaps solitude, in which it may have been left, if the theory of the hiatus be correct, long before, by the emigration of the paleolithic man with his animals towards the polar regions. That he came from the East we know, for there was no other direction possible; and we may suppose that he came as did all others of the human race, from its great cradle in the interior and northern part of Asia. He may have come via the Riviera, not across the Rhine, but he may have come in two sections or by successive waves—the southern one *via* the north of Africa, and crossing at Gibraltar.

The earliest immigrants were a long-headed (dolicocephalic) race, of small stature, not highly muscular, of dark complexion (the *homme brun* of M. Henri Martin), who spread himself over western Europe, including Great Britain and Ireland, but not east of the Rhine. This man is believed to have been the ancestor of the Ligurians, the Iberians of Cæsar, the present Basque population of France and Spain.

The second wave of immigration was a broad, square-headed (brachycephalic) race, tall and muscular, which mixed with the former inhabitants on the continent, but which, according to Mr. Boyd Dawkins, did not penetrate into Britain.

And, to complete this chapter, I add that in the succeeding, the bronze age, there came another wave of immigration—this time from over the Rhine—of tall oval-headed, fair-haired, blue-eyed, and blond-complexioned race (the *homme blond* of M. Henri Martin), who, in connection with sundry smaller waves of immigration, have been called, indifferently and successively, Celts, Gauls, Belgæ, Germans, and who spread over this country and held it in portions each for himself, until the epoch of history, Cæsar's invasion.

However and from wherever the neolithic man made his appearance in Western Europe, he brought with him an entire different civilization from that of the paleolithic man who had preceded him.

He brought with him the knowledge of polished stone for implements and utensils. His hatchets were sharpened at the broad end instead of at the point, as formerly. He brought with him the knowledge of agriculture, of flocks and herds, of plants and fruits, of textile fabrics. He was farmer and herder, as well as hunter. He made pottery, but always by hand, and baked in the fire or dried in the sun. He had a knowledge of mechanics, used the lever, the roller, and the inclined plane. He established workshops and his labor was divided into different handicraft, each working according to his respective skill and ability. His art was entirely changed. It was confined to ornamentation by lines and dots in geometric patterns, and the realistic engravings and sculpture belonging to the former epoch were entirely lost.

He had fixed habitations. He had a government or some sort of organization of society. He was capable of long-continued plodding labor and performed herculean tasks in the construction of his monuments, while he had capabilities as well as ideas of beauty and art in the manufacture of his implements and ornaments, especially those of jade and precious stones. He had a religion. He buried his dead and deposited some of his choicest valuables in the grave with them and erected over them monuments, the grandest and most expensive, so that they have endured until the present, and are now being purchased, restored, preserved by the government in nearly every country in Europe.

The characteristic implement of this age is the polished stone hatchet. The characteristic monument is the dolmen—the ornamentation, geometric figures made by dots and lines.

These all began in, and belong to the neolithic age; and yet, (as is the case with every change in civilization), they did not disappear with it. They continued into the succeeding, the bronze age.

Dolmens are distributed over nearly the entire eastern hemisphere. There are about 3,500 in France. They are plentiful in the center, south, and west, but rarer in the north and east; plentiful in Great Britain and Ireland, in Spain and Portugal, in Denmark and Sweden; some in Belgium and Holland, the Rhine country, and Western Germany; none in Norway; almost none in Italy; none in Eastern Europe. The city of Dresden marks about the dividing longitudinal line.

They are found on the coast of Northern Africa, between Morocco and Tripoli; in Palestine, in Asia, in South and Central America, but not in North America.

It was once the fashion to speak of these monuments as having belonged to the Druids of ancient times; also that there was a race to be called by the name of Dolmen people. Both these theories have now been abandoned.

The dolmens were sepulchres. In the neolithic age the burial was usually, almost universally, by inhumation. In the succeeding ages it was by both inhumation and incineration.

It is believed that interments were made continuously in the same sepulchre, as is done partially in vaults at the present day. I found in the dolman of Marie Guillard in Aveyron the debris of thirteen human skeletons. In Port Blanc we found forty or fifty; in Poulzougue near Gramat 400 human teeth.

It is a *grave* question whether there were not two burials, one in the flesh, and the other of the bones after the flesh had departed or became mummified. This subject would fill a book, and M. E. Cartailhac has written an extensive one thereon. It is a custom still prevailing in western France to sell lots in cemeteries for the space of six years, at the end of which time the



bones are removed and placed in what is called (a good name) an ossuary. This is a huge vault, sometimes 20 feet deep and 100 feet wide, circular, arched over, with opening man-holes. I have seen at the Cemetiere de la Miséricorde at Nantes, this circle on the *Jour de Tous Saints*, surrounded by men, women and children in files two or three deep, at prayer for the souls of those whose bones had been shoveled or dumped *pell mell* into this great receptacle, while the bouquets, flowers and wreaths of immortelles were piled up before them in a winrow.

The archæological and ethnographic museum at Quimper has the carved stone entrance to the ossuary arranged as one of its principal exhibits.

At the Chartreuse of Saint Anne d'Auray the guardian obligingly attaches his lantern to a long pole and to wave it into the ossuary to show to the curious visitor the bones of the loyalists who were shot, murdered, at the attempted landing at Quiberon. It is not strange that this custom, extending as it does over the country, should have descended from the prehistoric times.

To show the force of tradition one might look at the names which have been given to the dolmens, by the common people, Grotte of the Fairies, Grotte of the Devil—of the Druids—Tomb of the Giants—of Gargantua, and showing the worthlessness of tradition as actual history they are called in the interior of France and up and down the western coast (where they still speak the Gascon patois) the tombs of the English—this after, or in consequence of the invasion of that nation in the time of the Black Prince.

The polished stone hatchet is or has been believed by the common people to have descended from the heaven by the thunder or lightning. They are called indifferently *pierre de tonnerre*, *tonnerre*—or *pierre de foudre*—thunder stones or lightning stones. They are kept as a safeguard against the thunder and lightning. I have heard a peasant tell of seeing the stroke of lightning descend in the adjoining field, and when he went, he found there the stone hatchet which he held in his hand, just fallen and *still hot*.

THOMAS WILSON.

Washington, D. C.



## PREHISTORIC ARTIFICIAL TERRACES IN OHIO.

If we are to judge by the large number of human remains which have been found along the Little Miami, some of them gathered into closely occupied cemeteries, and others lying, so far as investigation has yet gone, in detached graves, no part of Ohio possessed a more considerable population of that people, or *those peoples* whom we class under the general head of prehistoric, than the district mentioned.

Judging from the large number of places of interment already discovered, and numerous other evidences of their presence here, it would hardly be an exaggeration to say that the hills on both sides of the river from Central Greene county to the mouth of the Miami, are almost a continuous cemetery; nor were the hills the only places of interment; the valley was quite frequently used, and while the number of interments already discovered, no doubt greatly exceeds the number of those which have been made by our race since the country was settled, less than one hundred years ago, probably but a fraction of the remains have been, or ever will be found. The bones exhumed owe their preservation to the very favorable conditions under which they were buried, but which I shall not undertake here to explain, and the comparatively recent date of burial, and we can take no account of the multitudes which have been buried so long, or were buried under conditions less favorable, that have entirely crumbled to dust and have left no evidence behind.

There seems no good reason to believe that the interments of the dead, or the abodes of the living, were confined entirely to the near neighborhood of the river, but away from it the conditions for the preservation of the bones were not so favorable, and they have, in the lapse of time become inextricably blended with the soil in which they were buried.

While evidences of the dead are so numerous it has always been a matter deserving of wonder that so few traces have been found of the homes of the living. These must have been without exception built of perishable materials, but even in that case one would think a numerous population would have left frequent domiciliary traces behind, in the way of charred hearths and otherwise.

It gives me much pleasure to say that discoveries have lately been made in this neighborhood which promise, when followed out, to throw much light on this subject. Some months ago I

received a letter from Clayton Parker, at that time living in western Illinois, but many years ago, a resident of this neighborhood, in which he drew my attention to certain "dug ways," as he called them, running horizontally along the bluffs or steep hills, bordering Cæsar's Creek, a large tributary of the Little Miami, which enters it about three miles south of Waynesville, in Warren County. He also mentioned in the same connection a ditch, evidently of prehistoric origin like the terraces, which began at a spring some distance back from the bluff on the south side, and proceeding in a straight line, passed on over the bluff and terminated at one of these terraces.

The information obtained from Mr. Parker was at once communicated to Mr. George S. Sale, a gentleman deeply interested in archæological matters, and whose lands border upon Cæsar's Creek for a considerable distance. Mr. Sale has lived where he now lives nearly seventy years, and had known of the existence of terraces along his lands and elsewhere along the bluffs, but, like most others, had ascribed their origin to natural causes and had given them little attention; but now he began their systematic study and carried it out alone at times, and also in conjunction with the writer, all summer and fall.

It is necessary to say here that Cæsar's Creek, until it passes Harveysburg and reaches a point near three miles from its junction with the Miami, follows a pre-glacial line of drainage; near that point, its large valley was completely filled with drift, and when water began to flow again, from there on it wrought out for itself a new channel with a very narrow strip of bottom land, sometimes all of it confined to one side of the creek, while on the other the current has in one place undermined the bluff until large sections of the original blue limestone with its attendant shales, are exposed to view. Through all this distance the hill-sides or bluffs bordering upon the deep glen are very precipitous, though in places more so than in others. On the whole, they maintain a general uniformity of outline, which is interrupted by a couple of small water-courses and a few ravines and washes. These bluffs are near two hundred feet high, and certainly present on their faces, as nearly as possible, the same appearance they did when the country was settled. The small amount of timber that has been removed has been replaced by that of younger growth, so that it is not missed. These steep declivities are, moreover, covered with a dense growth of underbrush, which, especially in summer time, effectually obstructs the view and is at all times difficult to penetrate. Add to this, the fact that until the road across was graveled, a few years ago, the trip across the deep narrow valley was one of the most uninviting that could be found in Warren County. In short, in the midst of a thickly-settled community is a belt of land, a third of a mile wide and three miles long, but little known, even to many who live near at hand.

I remember being told, more than thirty years ago, that there were numerous land slides along those bluffs. It must be admitted, however, that some of the early settlers had regarded them as artificial, and ascribed them to the same origin as the mounds, but of late years they have attracted but little attention. When the recent systematic explorations began, an attempt was at once made to locate the ditch mentioned by Mr. Parker. Owing to the length of time since he saw it, his description was imperfect and misleading, especially as the land through which it runs has long been under cultivation, though it was in woods when he saw it. All search for the ditch was at last abandoned, and our attention was confined to the terraces. It seemed hardly possible that such extensive works of the kind, in such a place, too, should be artificial, and an attempt was made which never fairly satisfied either of the explorers, to ascribe them to some natural cause, but as Mr. Sale's examinations progressed he became fully convinced that they were the work of the prehistoric people who have left so many evidences of their presence in the neighborhood, an opinion in which I also fully concurred after becoming better acquainted with them.

After many years' absence in the west, Mr. Parker returned to this vicinity but a short time ago, and at once undertook to show us the little aqueduct of which he had spoken. I have mentioned a new road across the valley and up the hill; there is also an old road near the same place not so well located and not now used. Mr. Parker decided after much search, that even the old road was not the one he traveled long ago, and finally found traces of the original one, which he followed, more through the inspiration of his memory, than from manifest traces, and soon reached the brow of the bluff alongside a dry spring branch. After following it, now cut deep into the soil by excess of surface water, we reached its source, and found, not a spring, indeed, but a place where a spring had been, and near it a very shallow well, with water standing in it a few feet from the surface, and that during a period of almost unparalleled drouth, with many deep wells in the neighborhood dry.

The history of the spot was evident; an old barn stood near, and the foundations of a house that had been burned down. The spring had been drained by the deep wash that had worn into the loose soil since the land was cleared, but a shallow well was found sufficient by the modern occupants of the land, to tap it. From this point we started back towards the bluff and soon found traces of the ditch or aqueduct, which diverged from the natural direction of drainage until it finally passed over the bluff to a terrace about seventy-five feet from the crest, at a considerable distance from the natural line of drainage, and several hundred yards from the spring. When Mr. Parker first noticed the ditch, many years ago, the land through which it runs was all in woods, as was also much of the adjoining country.

I regard this as a very important discovery, and it was due entirely to Mr. Parker's persistence that the rediscovery was made, after a lapse of nearly forty years from the time he first discovered it. It shows a method on the part of the terrace builders; a desire to obtain fresh water, most likely, to supply in a convenient manner, people living on the terraces. As to the terraces themselves they are to be found on both sides of the creek. They are found from a point about half a mile down the creek from the new iron bridge on the Waynesville and Clarkesville road, nearly or quite to the point where the valley of Cæsar's Creek enters that of the Miami. They are not continuous or unbroken; they end abruptly a little before reaching a ravine, then start the same way a little beyond; then there may be a wide interval between one terrace or group of terraces and another. There may be but a single terrace on the hillside, or there may two, three or even four, one above another. They run quite horizontally along the hillside, the general width is about a rod, but some of them are thirty or forty feet in width. Where there is but a single terrace, it is narrow, while if there are two or more, at least a part of them will be double or triple width. In all cases the width is faithfully maintained throughout their length where there are two or more terraces in a group, the lower one is likely to exceed those above in length.

One of the most interesting groups is on Mr. Hisey's farm. The whole hillside is wrought out into broad platforms, the upper one being the broadest and shortest, the face of the hill behind, having been dug away so as to form an amphitheatre with an arc of about 180 yards. There is a similar example though not so large on the south side of the creek.

As a general thing the terraces, when in groups, are from 200 to 300 yards in length. Some single ones are much longer.

The aggregate length of those which have been discovered and traced along Cæsar's Creek is more than 5,850 yards, or considerably exceeding three miles; besides which it is most likely there are some which have as yet escaped identification. In places they are obscure and a practiced eye is needed to detect them, nor is this to be wondered at, on these steep hillsides. There must have been some waste to the width of all of them, through the action of frost and water on the lower side, and a constant tendency in the mellow loam on the hillside above to slide down upon the terraces for the same reason, so that all of them must be narrower than when they were left by their builders; but in most cases they are remarkably distinct and well preserved.

From large portions of these hillsides it does not seem probable that any timber has ever been removed since the country was settled by white men. Some of the best in the country may still be found there; the same that stood there when the

country was first settled, and which will remain there for a long time to come, because of the difficulty of removing it.

This secluded nook seems to be a favorite haunt of the coon, it having retired to it as a place of comparative safety, but the hunter has followed him up, and large trees have been cut down to dislodge him and left to rot upon the ground. The creek through the distance with which it is associated with these terraces, has great uniformity of width and depth. The hard rocky bottom does not favor the excavation by the current of deep pools. Where lateral branches or prominent torrents enter it, there are obstructions caused by deposits of blocks or slabs of limestone, brought in by these branches, which they have dislodged from their own beds or banks and brought along during freshets, this causes shallow pools of large extent; elsewhere the current is broad, shallow and rapid.

If we could imagine a condition of things involving removal of the greater portion of the timber and all of the underbrush, the view up and down the glen from any one of these terraces would be quite extensive and attractive; if the timber and underbrush were all removed there are places from which most of the terraces could be seen at a glance. The height of the bluffs and their abruptness shelter the valley from winds, and to some extent from cold, while in summer the shade would be not less grateful; add to this, the presence of the creek with its broad and swift current, and wild as this locality seems now, under the conditions named it would be an attractive abode even for civilized man, and there seems no reason to doubt that it was appreciated and densely peopled by some prehistoric uncivilized race.

This people must have had some motive or purpose in performing the large amount of work required in constructing these terraces in such difficult places. They had in view some advantage, real or imaginary, in the way of comfort, security or convenience; or they were following a habit adopted from their ancestors, and for that reason believed by them to be the proper way to construct foundations for their dwellings. In the old world, hills and mountains are terraced for purposes of agriculture or horticulture, because of scarcity of land for the requirements of a dense population. It is not probable that any prehistoric people that ever occupied this country could have been to any extent straightened for land for any such purposes; besides these terraces are not apparently so designed. I think the evidence is strongly in favor of them having been constructed for dwelling places, and that they were so used; the simple dwellings of the people being arranged along them, each terrace, or group of terraces, representing a village or family, and the whole valley a commonwealth or tribe, under one government or leadership.

Even those who are best acquainted with these terraces have

not had time to fully establish the fact by local discoveries that they were really constructed for that purpose. An examination, to be quite conclusive would require an amount of time and labor that few who take an active part in the affairs of this busy life can devote to it without a special vacation. In case they are the sites of villages we would expect to find on them numerous charred spots, emphasized by many bits of half calcined limestones, representing "hearths." There are such spots clearly defined in the near neighborhood. And at least two have been found with little search, on the terraces, just where they are wanted; but the terraces are in such condition, and are so located that such evidences can only be found by systematic search, with pick and shovel. They are in an unfrequented place, and have been subjected through great length of time to an accumulation of soil washed down from the upper slopes, and created on the spot by the decay of leaves and other vegetation. This would cover, and to some extent neutralize, the evidences spoken of; but some must remain, and I am confident that upon suitable search being made they will be found, a little below the surface. The idea that these terraces are merely landslides, is too preposterous for lengthy consideration. That there are landslides there, is true, though not so many as has been supposed, but they can readily be distinguished by the practiced eye from the work of man. In one instance the whole hillside has been broken down from top to bottom and the surface left in uneven billows for a distance of several hundred yards, due, as is said, to the earthquake of 1812. The terraces are uniform, horizontal, often repeated.

A like sweeping objection can be made to the theory that they are alluvial terraces or in any way due to the action of water; their position is too variable along the hillsides; they are not composed of the right materials, nor is the geological history of the valley such as to warrant it. And above all, there is too obvious a method in each terrace and in the groups of terraces. They are platforms built out from the bluff side, generally without much show of excavation along the upper side of the terrace. The earth seems to have been in a measure brought from somewhere else, from the loose surface soil, most likely, wherever it could most easily be obtained. Sometimes the signs of excavation back of the terraces are more readily seen. They are, unqualifiedly, artificial, and would have been so recognized and described long ago, but no one had ever seen them all until this late exploration, and knowledge of them in detail was entirely wanting.

There is on each side of Cæsar's Creek, nearly a half mile from the bluffs and about midway of this system of earth-works, a mound six or eight feet high, with broad base. Near the one on the north side several graves, with human remains, were found many years ago. The mound on the south side is rather

the larger of the two. On the Kelly farm a mile and a half away, along the river hills, and on the Hiram Taylor farm in the other direction, (south) extensive cemeteries have been found. Also on Cyrus Smith's lands and adjoining. Indeed the river hills on the east side for a long distance seem to be a continuous cemetery, which has in places crept down into the valley, so that the interments within three miles of the mouth of Cæsar's Creek have most likely numbered thousands, making it more than probable that generations of the race to which the builders belonged were buried not far away. Nor are these remains found only on the east side of the river. At a point nearly opposite the mouth of the creek, half way up the rising hill, is another terrace; and just above it, a cemetery from which numerous skeletons accompanied by earthen vases of different sizes were taken some years ago, while farmers were hauling gravel for neighboring roads.

Now that these terraces have been identified as artificial, and their meaning most likely discovered, it will no doubt be found that there are many others intended for a like purpose. Along the steeper portions of the Miami hills, and reaching out along the narrow lateral glens which lead into the valley of the Miami; and not only there, but in similar localities all over the western states where tumuli and other earthworks give proof of the occupancy of the country by the Mound-builders.

Mr. George Ridge, who lives just back of Fort Ancient and whose lands include a part of the works, lately wrote to Mr. Sale, in reply to inquires from him on the subject, that there is a terrace on each side of the ravine which bounds the fort on the north side, and one along the river hills on the west side of the river. The first mentioned have never been recorded in any description of the fort I have ever seen; the latter has been mentioned as an "old road" of the Mound-builders, while a series of three, one above another, just below the southwest corner of Fort Ancient, where the river comes nearest the hill, is duly recorded in a very old map of the fort in my possession, but the opinion is also expressed that they may be land-slides. There are terraces on the lands of Hiram Taylor and Timothy Neal near Oregonia, another on the lands of Cyrus Smith, just below the mouth of Cæsar's Creek, and it has just come to my knowledge that terraces answering the description of those we have mentioned are to be seen high up the hills at Red Bank, near Pendleton, Hamilton county.

It ought to be mentioned in this connection that on the west side of the river, a mile above the mouth of the creek, on a broad alluvial terrace, from which the bluffs drop off to the bed of the river by a steep escarpment, there is a circle about 300 yards in circumference enclosing a mound, the whole surrounded by a ditch now nearly filled up.

As to the terraces along Cæsar's Creek, it is not probable



that any man now living had ever seen them all, until seen by Mr. Sale and the writer, and even yet there may be some there that have not been noticed or located. Some may have been so nearly obliterated by the action of frost and water as to have escaped notice in the interminable thickets which everywhere abound. Mr. Sale deserves much credit for his efforts to bring them to light and place them on record, as a new and unexpected addition to the works of the Mound-builders, and will take much pleasure in showing them to intelligent and appreciative visitors.

THOMAS J. BROWN.

## INDIANS OF PUGET SOUND.

[SIXTH PAPER.]

### MEASURING AND VALUING.

*Washington*

*Counting.*—The numeral system of these Indians goes by tens. Herewith, for the sake of comparison, I give a few of their numerals, and add the languages of several neighboring tribes, which I have gathered from members of those tribes, who are either intermarried or have visited the Indians among whom I have been living. These comprise the various languages spoken on Puget Sound, both in Washington Territory and British Columbia and on the Pacific coast in Washington Territory.

In the Twana, *stcūtē-ha-tē*, and in the Nisqually *ska-suk-a-tē* mean *hand*, hence we have from the same root the words for six and eight in the Twana, Nisqually, Skokomish, for six in the Kwinaiet, and eight in the Skagit.

Kl-tats is the Clallam word for hand, and the root of the same word is found in the word for eight in their language, and that of the Lummi and Cowichan Indians.

Hūlkwūt is the Chemakum word for fingers, and it is seen in the origin of their words for seven and eight.

In the Upper and Lower Chehalis the word for eight seems to be derived from those for four and two, that is twice four.

Sa-liē-two runs with little variation through the Twana, Nisqually, Skokomish, Upper and Lower Chehalis, Kwinaiet, Couichan and Skagit. An examination of Gibbs' vocabularies in Vol. 1 of Contributions to North American Ethnology (pages 262 and 280) and Tolmie and Dawson's Comparative vocabularies of the Indians of British Columbia, shows that a similar word is in the Shooswaap, Okinoken, Shwoyelpi, Skoyelpi, Spokane, Kullispelm, Coeur D'Alene, Flathead, Tait, Kuwalitsk, Snanaimo, Kwantlin and regular Chinooks. The Hoh, Kwilleut, and Chemakum languages would fall into a separate class in regard to this word.

*Klé-hu*, three, slightly varied is in the Nisqually, Skokomish, Clallam, Cowichan, Lummi and Skagit, also in the Tait, Kuwalitsk, Snanaimo, Kwantlin and Songis. In this word the Hoh, Kwilleut and Chemakum are again similar. The Upper and Lower Chehalis, Kwinaielt, Shiwapmukh, Shooswaap, Nikutemukh, Okinaken, Wakynakaine, Shwoyelpi, Skoyelpi, Spokane, Piskwaus, Kalispelm, Kulleespelm, Coeur D'Alene, Flathead, Lilowat, and Komookhs are similar.

The word for four, however, in slightly varied forms, easily traced, combines more of the languages given than any other numeral; *bai-es*, *busus*, *bos*, *boh*, *nos*, *ngos*, *mos*, *mees*, and similar variations are seen in all the languages, of which the numerals are given above, except the Chinook jargon. It is the only one which connects the Makah with the others, and shows relationship also in the following languages: Coeur D'Alene, Spokane, Skoyelpi, Shwoyelpi, Okenazen, Kullispelm, Piskwaus, regular Chinook, Bella Bella, Ahts, Songis, Tait, Shooswaap, Nikutemukh, Lilloet, Kowmock—twenty-nine in all.

The Chinook jargon is connected with the others only through the Upper and Lower Chehalis, and Lummi, by the word for six.

It is somewhat singular that of the six languages of this region which I have studied somewhat, namely the Twana, Clallam, Nisqually, Chemakum and Upper and Lower Chehalis, none are similar in the number one, while there is a similarity in every other of the first ten numbers. Between the Upper and Lower Chehalis, also between the Nisqually and Skokomish, there is a similarity in eight of the numbers; between the Lower Chehalis and Skokomish, also between the Lower Chehalis and Nisqually, each in six of them; between the Upper Chehalis and Clallam, also the Nisqually and Clallam, also between the Upper Chehalis and Skokomish, also the Upper Chehalis and Nisqually, each in five; and between the Lower Chehalis and Clallam, also the Clallam and Skokomish, in four of them. The Upper and Lower Chehalis, the Skokomish, the Nisqually and Clallam, are similar in regard to the numbers two, seven and ten.

There has been considerable discussion as to whether words which sound alike show a similar origin of the tribes speaking them, but Prof. A. D. Whitney says that numerals and words indicating relationship are of more value as evidence on this point than any others.

The Twana language has another form of numerals for counting money, stones and small, round things, which differs from the form given entirely in the word one, *pal-aúls*, and in the other words by adding to the word above given, *lis*, *elis*, *alis*, or *talis*, as a final termination. Thus, two is changed from *essalt* to *essalis*; six from *iapatci* to *iapatcillis*. The Nisqually does the same by adding *els*; *kle-hu*, three, becomes *kle-hu-els*, and *bos*, four, *bosels*. The Upper Chehalis likewise add generally *aus*, *is*,

or ts. Mos, four, becomes mosis; and tatum, six, tatumts; but for one and two entirely different words are used, which are na-tcaus and tsámis. The Clallam, for the same purpose, uses the suffix ai-ûthu or kûth-hu, so that nûtsa, one, becomes nûtsa-kûthu, and tats, eight, tats-ai ûthu. This language also has a third form for counting animals, which consists mainly in using the suffix eks or eiks; nûtsa becomes nûtseks, and tats tatseiks.

For the numeral adverbs, as once, twice, and the like, the Twana adds ol-shid or tol-shid. Thus one, da kus, becomes da-tcô-shid; bos, four, is bos-ol-shid; tsa-hivés, five, tsa-hives-tol-shid. The Nisqually for the same purpose adds atl, except with once and twice. Four, bos, becomes bosatl, and eight, tû-ka-tci, becomes tû-ka-tci-atl; but once is di-tcá-hu and twice tsûb-áb. The Upper Chehalis adds generally the termination shîn, ta-shîn or u-shîn, but once is ná-tcu-shîn, and twice tsain-shîn. The Clellam generally adds atl, except for once, which is nûts-a-hu, and twice, which is tsûng-tsang; seven times being tsaksatl.

For the distributive numerals, one to each, two to each, the Twana generally adds hopis; the Upper Chehalis ti or sti, with the exception of the first, o-a-tsa-sti; the Clallam has words, but they are very irregular, and I have not been able to find any such form in the Nisqually.

For the ordinal numbers, as first and second, the Nisqually generally adds il or sil to the numerals, although first is dze-hu; sometimes the first syllable is also slightly changed. The Clallam generally prefixes a, as, eighth is a-tats; but first, iltcáe, and second, tultûs, are irregular. I have not been able to find any such forms in the Twana or Upper Chehalis.

I am not aware that they knew anything about multiplication before the whites came, except by repeated additions.

*Time.*—The year was divided into thirteen moons, for each of which they had a name, and they had terms to indicate the waxing and waning of the moon, but I have not been able to learn that they had any names for particular days. The day-time was divided into dawn, sunrise, forenoon, noon, afternoon, sunset, and dusk; the night had only the division of midnight. For each of these different parts of the day and night, they had separate names.

Originally they knew nothing of the division of days into weeks. They say they first obtained the idea of Sunday from the Klikitat Indians, before the English came. After this they often met on Sunday—sang, danced, prayed, tried to purify themselves, throw away their bad and make their hearts good. On that day they also married wives. Since they obtained this knowledge of the week, they have given names to the various days. Among the Twanas the meaning of the name for Sunday is holy day, and of the other days, one day past, two days past, etc., with the exception of Saturday, which means “alongside,” i. e., of Sun-

day. The names of the months are given to each because of some special occurrence during that month. Among the Twanas that for March means "getting warm;" that for August, "the deer sheds its horns;" that for September, "the male deer seeks its companions;" that for October, "the grass dies;" and that for November, "the grass goes into the ground." Among the Clallams the name for September signifies the same as among the Twanas. It is Tcin-hive-tcîn, from hivetcîn, they cry. The Indians also have names for spring, summer, fall and winter.

*Measures of Length.*—They had four standards of such measurement; (1) from the end of the thumb to the end of the middle finger, outstretched; (2) from the shoulder to the end of the corresponding hand, with the arm extended; (3) from the shoulder to the end of the opposite hand, arm extended; (4) the fathom.

In travelling the standard was the distance which a person could travel in a day. I do not know that land was measured, but in all square measure the above linear measures were used.

*Cubic Measure.*—In measuring articles of bulk I cannot learn of any other standards except their baskets; nor do I know of any basket of standard size. A person making a bargain for a certain number of basketsful, would have to see the size of the basket.

*Valuing.*—The dentalia and abalone shell, or parts of it, were the nearest thing to money which they had, the former being the most valuable. A species of olivella shell, found in Clallam waters, was sometimes brought to the Twanas by whom it was used partly for money. Slaves, skins and blankets were also used for the same purpose, or rather for barter. The value of the dentalia shell depended on its size, the long ones being more valuable, according to their size, than the short ones.

*Trade.*—Their modes of trade were sometimes direct and plain, and sometimes peculiar. Often one person made a present to another who did not wish to receive it, but could not refuse, lest he should give offense. Still the giver would soon after name the amount that he wished in return, and he always expected enough to satisfy him. If he did not get it there was trouble. Often too after a direct trade, and the article, such as a horse, had been used for six months or, if there was trouble, the animal would be returned, the bargain not being considered binding. If a horse should die after having been used a long time, if it were not paid for, more than likely the buyer would claim that the seller must lose part of the price. It was too hard "to pay for a dead horse," or other article destroyed.

*Debts.*—They are generally in debt to each other, and these debts are often of long standing, sometimes ten or more years. It is only when there is trouble between them that I have been able to learn of some of these debts. One man gets vexed, and so wishes to collect what is due him. The other brings in another

debt as an offset; next, the first party brings up another, and so on. They remind the court of transactions ten or fifteen years previous, and even a debt of relations, and wife's relations, is often brought up to be considered as much as if it were a personal one.

At one time an old Indian living at Seabeck was invited to a potlatch at Skokomish; he accepted the invitation, but while attending it his house was broken into and robbed of property of considerable value. As he could not find who did it, he claimed that the man who invited him to the potlatch ought to pay him; because, if the giver of the potlatch had not induced him to leave home, he would not have lost his articles.

*Commerce.*—They have dishes made from the horn of the mountain goat or sheep, which are said to have come from the Stikine Indians of British Columbia, six or eight hundred miles to the north; the dentalia shell, their ancient money, also came from the same region, and they occasionally obtain articles from the Haida Indians of Queen Charlottes Island. They obtain baskets, pipes, buffalo robes and horn dishes of the Klikitats and Yakamas of Eastern Washington, one hundred and fifty to two hundred miles to the east; baskets from the Chehalis and Cowlitz Indians, a hundred miles to the south, and from the Quinaielt Indians, on the coast, about the same distance to the west. The distances spoken of are in a direct line; the way by which the articles come is much further, sometimes twice as far. The northern traffic is mainly by water, but that with the Klikitats, Cowlitz, Chehalis and Quinaielts is mainly by land, which accounts for the difference in distance. The articles from these distant tribes is, however, limited in number, and most of them are obtained through some intermediate tribe, but there is considerable traffic among those tribes who live inside of these limits, as the Skokomish, Skagit, Puyallup, Lummi, Makah and Victoria Indians. At present thousands from these tribes meet every fall in the Puyallup and adjoining valleys to pick hops for the whites, when considerable trading is done. Their relation with all at present is peaceful, and it has been so for many years; and as all of these tribes have made about the same advancement in civilization; their influence is neither particularly elevating or depressing.

The great amount of trade and, contact however, which they have had with those outside of their own tribes for the past thirty years, has been both favorable and unfavorable: favorable with reference to food, clothes, houses and habits of industry, and against theft, falsehood and murder tamahnous, but unfavorable in its influence on temperance and chastity.

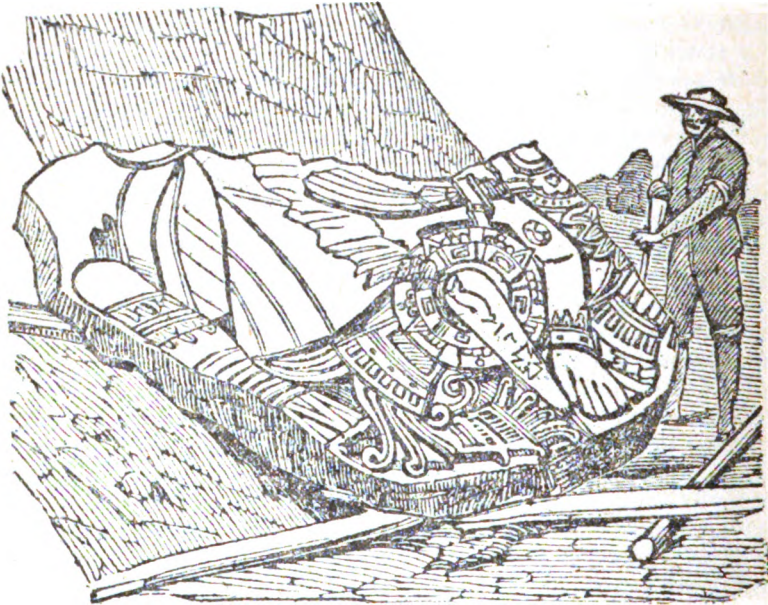
M. EELLS.

Skokomish, Washington Territory.

## THE SCULPTURED STONE OF TEZCUCO.

On a morning in May, in the year 1881, I embarked from the landing at San Lazaro gate in Mexico, in a passenger scow forty feet in length, bound for Tuzcuco. The flat-bottomed boat was about six feet in breadth, roofed with boards; two benches, one on each side, were for the passengers, of whom there were about a dozen, while the baggage was piled promiscuously everywhere. The crew of this craft consisted of ten men, eight of whom were common "seamen," and there were the steersman and captain, the latter deeming himself a very important personage; all of these were Indians. We went down the canal to the lake, nearly three miles, in fine style, towed by half a dozen peons who ran with the line on one side of the canal, while a horse trotted along with a line attached on the other side, the boat stirring up the foul contents of the ditch to the bottom, sending forth villainous odors; but the rapid motion of the boat stirring up the stench served soon to bear us out of its jurisdiction. The boat drew eight inches of water, whenever it had an opportunity, but for nearly three miles after we entered the lake, there was but seven inches of water and the vessel settled down into an inch or so of mud, through which it was dragged by the mariners. After getting into deep water (two feet) the eight polemen at the bow, four on each side, set their poles and pushed along the craft, walking forward as the boat advanced. In some such manner, I am compelled to believe, the famous brigantines of Cortez navigated Lake Tezcuco. We had been four hours on the voyage and half way across the lake when we met a craft the counterpart of our own, on its way to Mexico; it was laden with modern Tezucans who were going to market, as their ancestors had gone, more than three hundred years before. Mirrored in the lake, with wonderful fidelity, were the peaks of Popocatepetl and its companion, their snowy heights gleaming in the pool like burnished silver; to add to the strange scene, was the sight of fishermen wading in the lake, ten miles from shore, and with dip-nets and snares taking the small fish and reptiles that abound in the locality. The lake has been to the Aztecs a never-failing source of food supply from the time a wandering tribe first encamped at the edge of a sedgy marsh until the present time. After being imprisoned on the boat from 8 A. M. until 3 o'clock P. M., and accomplishing twenty miles, we were landed at last near the site where Cortez launched his fleet of scows and three miles from the modern town of Tezcuco.

Within the limits of Tezcucó there are a few mounds—remains of ancient pyramids, built of adobe, stone, and earth; they are from 40 to 60 feet in height and from three to five hundred feet in diameter. An Indian had rented a small plat of ground on which one of the largest of these mounds was located, and in leveling the lower terrace on the western side to increase the area of his kitchen garden, he had encountered a large sculptured stone. This had happened a short time previous to my arrival and the next day after I got there, having heard of the stone, I obtained permission of the owner and engaged a number of laborers to hoist it from the pit and to search also for other relics. I found it to be a fragment of an ancient monument of porphyry, sculptured in bas relief with a design that I shall attempt to de-



*The Sculptured Stone of Tezcucó.*

scribe with the aid of an imperfect engraving of the object. The stone is eight feet in length, six feet nine inches in width at the greatest diameter and twelve inches in thickness; it is a fragment nearly one-half of a sculptured slab, representing a colossal human figure. The section remaining and here represented indicates that the perfect figure was broken off at the neck and fractured down the trunk of the body to the hips; the legs are not represented, their place being supplied by supposed mythological emblems; the left side, arm, a portion of the body and neck and a disk under the arm similar somewhat in design to the great calendar or sun stone, are in a manner intact; the left hand of the figure is shown with palm turned inward; the arm is eleven

inches in diameter at the junction with the shoulder and its length is three feet eight inches; diameter of the disk or calendar stone feet three and one-half inches. A steel instrument highly tempered applied will make but a slight impression on the stone. The surface of the stone shows marks of violence—and that a sledge or hammer has been used in defacing it; there is a gorget on the neck, a decoration or badge on the breast and emblems on the arms. Upon the index of the disk is an emblem that suggests a Maltese cross.

I reported the discovery of this curious stone to the authorities of the National Museum of Antiquities at Mexico and received their congratulations and it should be said that my announcement was the first intelligence they had received of the exhumation. It was my discovery in the same sense that other archæological treasures have been brought to notice in the midst of an indifferent population. The inhabitants of Tezcuco who had looked upon the stone seemed to attach small importance to the "find." The officers of the Mexican museum however were not slow in recognizing the value of the discovery and soon had the stone removed to the capital and later on were courteous enough to send me a cartoon in *papier mache* from which I have taken an excellent cast in plaster. The same authorities in the *Annals of the Museum*, give a description of the sculptured slab and announce the opinion that the human figure is probably a representation of the god of fire, in the Aztec mythology.

The object of this paper is to present a study of facts and to demonstrate that this stone as well as the sun or calendar stone and the so called sacrificial stone, could not have been the works of the barbarians whom Cortez encountered and conquered. To do this it will be necessary to disabuse the mind of false impressions of grandeur surrounding the mythical Montezuma and to look upon him as he really was: the chief of a tribe of Indians fortified in the midst of a marsh. The circumstances that environed Cortez must be considered in obtaining a correct view of the situation. It must not be forgotten that he was an outlaw when he first entered Mexico, in disgrace at the Spanish court, and that his attack on and capture of the forces of Narvaez made him a traitor to his sovereign with his life forfeit to the crown; the desperation of his cause required the most desperate measures to retrieve his lost reputation and re-establish himself in favor; this could only be accomplished by conquests that would dazzle the court with their brilliancy and assure the emperor of the acquisition of territory abounding in treasure.

From the time the march against Montezuma began there was a systematic bureau for the dissemination of false information established at the headquarters of the adventurer; this was manifest especially in the exaggeration of the numbers of the enemy they met and whom they almost invariably vanquished; the chron-



cles of Cortez never acknowledged a great defeat but in one instance, and that was on the occasion of *la noche triste* (the Night of Sorrow), the retreat from Tenochtitlan, when the baggage had to be abandoned. This was necessary to account for the loss of treasure, the fifth part of which belonged to the king, and who would have demanded an exact distribution. From Tlascala, a territory seventy by forty miles wide, the bureau of chroniclers constructed a country with a population of 500,000, a number ten times larger than the limits could support, and this falsehood gave them warrant for reporting an army of 140,000 auxiliaries from Tlascala. In the attack on Mexico this force was joined by 35,000 Tezcucans, which added to the Spanish cavalry, artillery and infantry, laid siege to a collection of mud huts similar in appearance to the adobe villages of the Pueblo Indians of New Mexico. In a single charge made by this formidable host of allies, twelve thousand Aztecs were slaughtered, yet this was but a single episode of the campaign; in every engagement thousands of Aztecs were slain, until the aggregate reached a number which was more than the entire population of the tribes of Aztecs, Tezcucans and Tlascalans combined. Nor are the exaggerations of numbers the only improbable things to be considered in the chronicles of Cortez; the cluster of adobe huts at the base of the ancient pyramid of Cholula is described by Cortez himself as "a rich and opulent city" of 40,000 houses, with 500 "mosques" similar in appearance to Mohammedan places of worship. Bernal Diaz, more moderate in this instance, estimates the number of "mosques" at 100. Of Tlascala, Cortez reports that a stone wall nine feet in height and twenty feet thick enclosed that territory; not a vestige of such wall can be found there now, because it never existed. Of the "empire" of Tezcucuo, Fernando de Alva says that it was the seat of learning for all the nations; that its sovereign was the patron of fine arts and his palaces were as magnificent as the imagination could conceive. The ancient works on the little mountain Tezcocingo, five miles distant from modern Tezcucuo, were drafted into the service of the historian and made to serve as the summer residence of the modern Tezcucuo chief; and Gomarra, Clavigero, Boturini and modern Spanish authors cite these ruins as relics of the magnificence of Tezcucuo at the time of the conquest. This includes the appropriation of the five hundred steps cut in hard porphyry leading to the summit of Tezcocingo—a task which Indians are no more capable of executing than to build a modern opera-house. As to Tenochtitlan itself (the city of Montezuma) the English language is inadequate to express the description given in high-sounding Castilian; the gates were of jasper and the palaces of hewn stone with pillars of marble.

It is difficult in this age of rapid transit and instantaneous communication of thought to realize the condition of Cortez

and his followers and how successfully they managed to make the world as well as their sovereign believe their marvellous stories. They were the pioneers of an unknown continent, absolute masters of the country they had overrun and their really wonderful military successes gave them warrant for the most gigantic exaggerations. Cortez wrote his dispatches to the emperor confident that he had no one to contradict him and the trophies he exhibited gave color to his fabrications. There were in his time ruins overgrown by rank tropical vegetation and from these he excavated sculptured slabs and statuary and sent these to Spain as relics of the people he had vanquished. There was gold in the country which the natives could gather from the sands in the most primitive fashion and a portion of this found its way to Madrid to inflame the avarice of the Spaniards; there were inexhaustible veins of silver, but the process of reducing the ore was of course not understood by savages and although the chroniclers spoke of the gorgeous images and plates of silver in the idolatrous temples, yet from the simple cause that silver was never reduced by the Aztecs there was no silver bullion sent to Spain except that which came from the smelting of the Spaniards or a few straggling specimens of native silver which an Aztec might have picked up and preserved with the same care that he would preserve the glittering pyrites of iron.

The picture-writing of the Aztecs was invented as a necessity to make the civilization of the conquered people conform to the exaggerations of the victors; the Aztecs no doubt, like all other barbarians, had a rude system of symbols to convey ideas of battles, ambuscades, incidents of the chase, and these were painted on bark or skins in the same manner that a Pottawatamie Indian of this latitude would attempt to convey thought. From such as this, however, the Spaniards manufactured an elaborate system of hieroglyphics and pretended to read from these inventions a history of the Aztecs reaching back to the early centuries before Christ. Lord Kingsborough, with the strange infatuation of an educated but superstitious European, consecrated his time and fortune to bring before the world these monkish inventions in an attractive form. The myth of Montezuma's "empire" rested solely on these picture-writings, and the value of the whole can be estimated when it is known that the legends relate an incredible story pointing unmistakably to the preaching of St. Thomas in Anahuac; through all of them there is a continuous vein of special pleading in favor of the Jewish origin of the Aztecs. The pictures themselves give evidence of their parentage; the ancient sculpture taken from the ruins is distinctive, like that of India or Assyria; the picture writings are drawn with a "fine Italian hand," representing in many unguarded instances Spanish and Italian faces, thus betraying the fact that a European artist unconsciously and naturally drew the likeness of that with which

he was closest associated. The relations of the Spaniards in all that pertains to Mexico are nearly all of the marvelous character, not excepting that of the apparition at Guadalupe, which, in the days of the later Diaz, is not deemed essential even by the church to believe. Is it not high time then that archæologists and historians should discard other stories equally as absurd?

With Spanish authorities as guides it is difficult to fix the date of Aztec occupation of the valley; each has his own date and none agree. Clavigero says the Aztecs came to Chapultepec in 1248. Now Chapultepec is but a few miles from the lake and less than two miles from the site of Tenochtitlan; yet in the annals of the Aztec peregrination, Padre Duran gravely takes account of the seventy odd years passed within less than half a day's journey from the *laguna* and compares the wanderings of the Aztecs to those of the Jews in the wilderness. On such slender threads hang the foundation of Spanish history in Mexico and the school of archæology based on such chronicles. Aztec traditions are to be relied upon with the same degree of suspicion that attaches to the tales of all uncivilized peoples and their claims for culture are to be judged by their works. The seeker after Aztec relics in the City of Mexico at the present day will find a barren field; there are no remains of the fabled Tenochtitlan; not a vestige of the great palace of the "emperor"; not a broken or perfect column; not a brick or stone from his mansion; not a foundation wall of a temple, because adobe huts are built without foundations; the first row of unburned brick being laid on top of the ground and frequently without having the ground previously leveled; of the great canals he will find enough to prove beyond a doubt that they were but narrow ditches traversing a marsh. There are however in the National Museum of Antiquities objects which will attract the attention of an observer, of more than ordinary interest and these will be considered in connection with the claims made as to their Aztec origin.

The Sun Stone or Calendar is said to have been discovered in an excavation near the site of the present cathedral and has occupied a place in the cathedral wall with its surface exposed to view; it has been made by the chroniclers to serve as a calendar for the division of time according to the Aztec chronology and its emblems interpreted to mean the weeks, months and days of the Aztec year. A cycle is also happily introduced. There is however a wretched discrepancy between the symbols represented on the stone and the picture-writings supposed to correspond to the same ideas. This might have been avoided had the inventors of the pictures taken a little more time and used more discretion. The monument is in an unfinished condition, as it is still in the embrace of a block of trachyte, with uneven diameter and rough corners. The so-called Sacrificial Stone presents the

best evidences of its own antiquity and at the same time bears on its surface a constant, silent, but appealing protest against the claims of Aztec workmanship. This object is a cylinder of trachyte twenty-seven feet in circumference and about thirty-three inches in height; the under surface is plain; the upper surface and circumference are covered with figures in relief. In the center of the upper surface is a circular cavity a few inches in depth which communicates with a channel that terminates at the circumference. The sculpture is a better specimen of art than any other work in the museum with perhaps two exceptions. It will be conceded that this monument was in use at and previous to the time of the conquest and was actually employed as a stone on which victims were slaughtered by the Aztecs. It was found in the vicinity of a *teocalli* or mound of worship by the conquerors and the Aztecs themselves acknowledged to the Spaniards, the use to which it had been applied. The prisoner was stretched prone to the surface, the life-blood was made to flow into the cavity and from thence through the channel to the circumference. The most ordinary observer will not fail to notice the inconsistency between the finely wrought, though grotesque figures in relief on the surface and the rude channel which makes its way through the sculptured portion, destroying that part of the surface and the design of the work itself; the channel is continued to the periphery and for a few inches is a rough gash, obliterating a part of the figures on the circumference that assist in forming a procession. It is as if a band of Sioux Indians had obtained possession of a European work of art and utilized it in their way as an instrument of torture. The place where the central cavity is now, was once perhaps where the sun was represented in a conventional manner.

This stone was used by the Aztecs as a convenient thing on which to kill their prisoners of war or on which to sacrifice victims to their idols, and, as is evident, paid little regard to the sculptured designs which had been wrought out through the patience and skill of the people who had preceded them. It is very probable that these great works of antiquity—the Sun and so-called Sacrificial Stones—were transported from Chapultepec or Teotihuacan, where there are evidences of ancient occupation, to the Aztec village on the marshes of Lake Tezcuco, and there made to serve in the rites of Aztec idolatry; it is also probable that they had not been long in Tenochtitlan at the time of the Spanish invasion. The most enthusiastic advocates of Aztec claims to art and civilization admit the antiquity of the pyramids of Teotihuacan and the monuments that have been discovered in that locality; the City of the Gods was in ruins when the battle of Otumba was fought, a few days after the retreat of Cortez from Mexico. The bureau of false chroniclers inadvertently told this truth in a description of the battle. Now the monuments of

Teotihuacan bear the same emblems that are inscribed on the Sun and Sacrificial Stone, as well as the sculptured slab of Tezcucó; it is also true that all the well identified objects of Aztec manufacture are atrocious caricatures, especially those representing the human figure. They are no worse in that respect than the baked figures of clay made by the Zunis and Moquis of Arizona and New Mexico, and are no better, which is the only comparison justifiable in the examination of such crude and childish efforts. The terra cotta heads of Teotihuacan display ingenuity if not true art in depicting the various characteristics of the human face; in representing the passions, and, strange as it may seem, heads with Roman and Grecian features, indicating either a high ideal of humanity or that the makers had encountered some of the best representatives of the race.

The "empire" of Montezuma was the intellectual creation of the literary and historical bureau appointed by Cortez—it was elaborated and embellished by Prescott and believed in now mainly, because it is a pleasant delusion. The Aztecs were a tribe of barbarians squatted in a marsh; the very emblem that is said to have been blazoned on the banner of the Indians—an eagle perched on a cactus with a serpent in its talons—is a glaring inconsistency applied to a people claiming the serpent as one of their deities!

A further examination of the subject will include observations as to the antiquity and origin of the Mexican monuments, and will be the topic of my next paper.

Ottumwa, Iowa.

S. B. EVANS.

## Editorial.

*Pict. 4.8.*

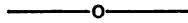
---

4

THE PRESERVATION OF MONUMENTS.

At the last meeting of the American Association, held in New York, a committee was appointed to devise some scheme by which the prehistoric monuments of this country might be preserved. The committee consisted of the following named gentlemen: Rev. S. D. Peet, editor of the *AMERICAN ANTIQUARIAN*, Prof. E. T. Cox, formerly geologist of the State of Indiana, and E. P. Vining, of Chicago. It is very desirable that measures should be taken immediately to preserve the monuments from further destruction, as they are rapidly disappearing. One effort has already proved successful. We refer to the effort to preserve the great serpent mound in Adams County, Ohio. This is now the property of the Peabody Museum, having been purchased by a private fund. For the inception of this effort, credit should be given to Miss Alice Fletcher, who fortunately called the attention of certain ladies at Newport, and afterwards put the matter in the hands of Prof. Putnam, of Cambridge. The success of this effort is an encouragement to others. It is said that another of the earth-works of Ohio is for sale, and that efforts are being made to purchase it. We refer to Ft. Ancient. This is very desirable and we hope it may be accomplished. We doubt, however, whether private funds and efforts of private individuals, or even of local societies are sufficient to accomplish the object desired. It would seem as if some more general plan should be adopted. In Europe the monuments have become objects of legislation. An act of parliament has already secured protection for several of the monuments of Great Britain. It is said that several of the most notable prehistoric monuments of France are to be preserved, having been brought under the protection of government, the standing stones at Carnac being among them. The government of Norway and Sweden long ago passed decrees by which certain monuments in those countries should be preserved. We think that the same effort should be made in this country. There are many facilities for so doing. In the first place, there is a large amount of United States territory in which many interesting monuments are found, and it would only require

an act of Congress to immediately place them beyond the control of private owners and beyond the reach of all despoilers. The cliff houses of Colorado and Arizona are in places where they can be protected. The old Pueblos are also on Indian lands, which are under the control of Congress. The monuments in the Mississippi valley are not so easily brought under the control of the general government; for the most of these state legislation may be necessary. It would seem easy to secure such legislation if the ball were set rolling. There are many mounds in public property, and it would require only a simple act of legislature, without any outlay to preserve these where the mounds are upon public grounds. The grounds of state asylums, state universities, soldiers' homes, and states' prisons come directly under the control of the legislature. But there are other public grounds besides these, grounds which are exempt from taxation, such as village cemeteries, city parks, college grounds, and fair grounds, over which legislature might easily assume control. In Wisconsin some of the most interesting groups of the state are on public property. This is also the case in Ohio. The works at Marietta are in a cemetery, and those at Newark are in a fair ground. There are other works which might be easily secured, as the very fact that they are monuments would hinder them from being useful for any other purpose. The great mound at Cahokia is large enough to have a field upon the summit and to be cultivated; but the most of the pyramid mounds are useless as private property. A small outlay might secure these from their owners. We suggest to our readers that they give attention to this subject, and that they furnish information as to the different classes of works referred to. It would seem as if this movement was important, and it is probable that some plan will be devised by which it will come to a successful issue. Will our readers please let us know as to the mounds which are situated upon public property?



### THE OHIO CENTENNIAL.

The centennial of the organization of the old Northwest Territory is to be celebrated during this year. Already has the first gathering taken place, namely at Marietta. The Ohio Historical and Archæological Society instituted this, and the celebration was in part under their auspices. There were present a number of celebrities; the exercises are said to have been very interesting. Addresses were made by Gov. Foraker, Judge Hoar, President Hayes and others. It was a very sensible celebration. No attempt at show or sensation, no parade of military or blare of trumpets, but interesting and valuable addresses and much of

historical information. Marietta is an old historic town and the seat of a college, the home of a cultivated people. The pre-historic works do not seem to have come into the account in this celebration and yet the pre-historic works at Marietta are very interesting. The next celebration will be at Columbus during the month of July. We hope that some address will be given in which the pre-historic monuments shall be mentioned. Five states have been hewn out of the old Northwest Territory—Ohio, Indiana, Illinois, Michigan, Wisconsin. Every one of them bears an Indian name. The tribes of Indians have been removed. We are now occupying the territory which once belonged to them. They deserve at least a mention during this celebration. On this territory there are works which belong to a people which preceded any of the known tribes of Indians. May it not be that one result of this celebration should be that these monuments are preserved from further destruction? We can transmit a gift to the future generations for which they will be grateful. Is not this a practical object? and shall it not be made prominent? We commend the subject to the attention of the archæological society of Ohio and to the gentlemen who may be in attendance in Columbus.

*M. M. M.*

—o—

## STONE MOUNDS AND STONE GRAVES.

The preservation of monuments suggests a thought about the stone mounds, stone walls, and other works in stone. These are much more liable to be taken down, and made useful in buildings, than are the earth-warks. Hence the importance of having a record of them. Stone mounds are of three kinds. Those which are composed wholly of stone, those which have stone chambers in them, and those which contain stone graves. Beside these are stone walls, stone graves, and stone circles, all of which are important in making up the archæological map. We ask our readers to give us information in regard to every structure of this kind. The following notes will show what kinds of structures there are:

STONE MOUNDS IN RALLS COUNTY, Mo.—George L. Hardy writes to *The Smithsonian* for 1881 in reference to the mounds in Ralls county, and says: "The mounds are invariably found within a mile from a stream, either on the bottoms or on the bluffs bordering the streams. They are composed wholly of earth, wholly of stone, or the two combined. Where stones were used the plan seems to have been to first to pave with flat stones for a natural foundation. To place the body on the stone and to have covered it with one or more, so that it is al-



ways found in a crushed condition. The remains found in mounds made of stone were generally much more decayed than those found in earth mounds. In one case a dry wall made up one foot and a half high and covered with a large flat stone on which other stones were thrown indiscriminately. In another case the bedstone was formed into a shallow trough, and flat stones covered the trough. On removing the flat stones, there was found a bed of charcoal several inches thick, animal and vegetable matter charred, showing cremation. Wilson's Knob is a crest about a hundred and twenty feet long. This was covered with stone to the depth of twenty to thirty feet, the pile being about twenty feet wide. This was found to have been originally a row of burial places, nine in number, circular in form, each from eight to nine feet in diameter (inner measure) contiguous to each other. The remains of the walls still stand to the height of twenty inches. Judging from the appearances it would seem that each had been of a conical or dome-like form. They were composed wholly of stone and the remains found in them were almost wholly decomposed.

MOUNDS IN THE MISSOURI VALLEY.—Mr. A. L. Brace wrote to the *Young Mineralogist* in 1884 concerning mounds in Andrew county, Mo. The peculiarity of these mounds was, they were covered with flat limestone, probably with the object of preventing wild beasts from penetrating them. The interior contained bones burned to a char and weighted down with heavy stones. The following are the relics: Shell beads, green stone implements, clay pipes, pottery, axes with grooves, wedges ten inches long, double bitted curved bark-peeler, [will any one tell us what kind of a relic that is?] flint flakes for removing dirt—from five to fifteen inches long, stone hammers with grooves, round balls for games, ceremonial stones, flint perforators, flint spear-heads, blunt arrow-heads, and a mill holding a pailfull, with its pulverizer, weighing thirty pounds. Has any one found such a mill as that described?

## LITERARY NOTES.

The next volume of the "Proceedings of the Davenport Academy" will contain the following archæological items: "An Ancient Mine in Arkansas," by W. A. Chapman, 4 pp. "Mound Exploration at Toolesboro, Louisa county, Iowa," by Messrs. Lynch, Fulton, Harrison and Preston; 6 pp. "Ancient Grooved Rock," by W. A. Chapman; 2 pp.; one cut. "Mound Explorations in Northwestern Iowa," by Prof. F. Starr.

**HERVAS, THE LINGUIST.**—America has the honor of having raised up one of the most eminent linguists in the world. Hervas lived from 1735 to 1809. He was a Spaniard by birth and a Jesuit by profession. While working as a missionary among the Polyglott tribes of America, his attention was drawn to systematic study of languages. After his return, he lived chiefly at Rome in the midst of the numerous Jesuit missionaries who had been recalled from all parts of the world, and who, by their communications on the dialects of the tribes among whom they had been laboring, assisted him greatly in his researches. He was followed by Adelung, who published his work called *Mithridates*. The empress Kathrine of Russia assisted in the work and the imperial dictionary appeared in 1787. It contains 279 languages, 171 for Asia, 55 for Europe, 30 for Africa and 23 for America. This was before the study of Sanskrit. The history of what may be called European Sanskrit philology dates from the foundation of the Asiatic Society at Calcutta, in 1784. It was through the labors of Sir William Jones, Casey, Wilkins, Foster, Colebrook and other members of that illustrious society that the Brahmins became first accessible to European scholars; and it would be difficult to say which of the two, the language or the literature, excited the deepest and most lasting interest.

**CIRCULAR ON PALEOLITHICS.**—The Smithsonian Institution has issued a circular inquiring about paleolithics in America. There is a mention in this circular of the article in *THE AMERICAN ANTIQUARIAN* by A. F. Berlin, describing the paleolithics in Pennsylvania; also of Dr. C. C. Abbott's find in New Jersey and Miss F. Babbitt's finds in Minnesota. We hope that as a result of this circular that all who have paleolithic relics in their cabinets, will furnish information to the Smithsonian or *THE ANTIQUARIAN*.

**URSA MAJOR.**—In the proceedings of the Society of Biblical Archæology for March, 1887, there is an interesting article on "Euphratean names of the constellation Ursa Major," by Robert Brown, Jr., F. S. A. The constellation of the Great Bear forms the chief of the northern signs as Orion does the southern signs. There is a remarkable correspondence between the two. The number seven is conspicuous in each. The title "confronter" is applied to the star combination untouched by ocean. Prof. Sayce suggests that the number seven in the arrangement of four and three in the two signs of Orion and the Dipper is remarkable. Other remarkable groups of seven arranged by fours and threes are seen in the heavens. The Little Dipper or *Ursa*

Minor has the same as Ursa Major or Orion. It is supposed that these signs were originally located by the Aryans. Proctor thinks that Ursa Minor formed a wing of the Dragon. He sees in the skies a picture of the Winged Dragon which was familiar to the ancients, and substitutes the Dragon for the Great Serpent of later times.

**MOTHER-RIGHT.**—The change from mother-right to father-right which Mr. Boaz observed when passing from the northern tribes to the southern, —or from the Eskimos to the Thlinkits—has been observed by others. The Dakota's held to father-right, and scarcely any clan or tribe among them held to mother-right. The Algonquins on the other hand everywhere held to mother-right, and never changed to father-right. There is a mystery about this subject in the case of the tribes referred to. Lineage and descent may have had something to do with it. The Eskimos belong to a different stock from the Thlinkits. The Algonquins were ethnically different from the Dakotas. The question is as to the transition from mother-right to father-right. Are there other tribes in America in which this transition has been discovered? Is it inevitable that in the progress of society matriarchy should change to patriarchy? In the east, especially in Scripture lands, the patriarchal system was the normal condition. There is no record in history of the mother-right having prevailed there. It would be interesting to find out at what stage in the progress of development the change took place.

**THE HOME OF THE ARYANS.**—After the discussion over the original home of the Aryan race, in which Lazarus Geiger, has placed it in Germany, Penka in Scandinavia, Poesche in southwestern Germany, Lomaschek in eastern Europe, Prof. Max Mueller comes out with a book claiming that his first position was right. The home of the Indo-Germanic nations was somewhere in the interior of Asia and probably in the vicinity of the upper course of the Oxus, whence at a remote period of antiquity the Indic and Iranian peoples migrated southeastward, toward Hindostan and Persia, and the Hellenic, Italic, Celtic, Teutonic, and Slavic northwestward, spreading over Europe.

**MR. AD. F. BANDELIER** of the Hemenway Southwestern Archæological Expedition, to whom it assigned the documentary historical research, and who last year copied in Mexico very valuable documents of which a large number were completely unknown, is now at work at Santa Fe, N. M., on the Archives, by courtesy so called.

---

### ✓ EUROPEAN ARCHÆOLOGY.

**M. KRASNOFF** has made some interesting discoveries in Turkestan among the rock inscriptions; the men are always on horseback, with bows, arrows, long pikes from which stream flags, and with curved swords. They are dressed like the present Khalat of the Mongols and Turks. The scenes relate to the chase; and among the animals shown is one very large one with a big hairy tail and tusks like those of the mammoth.

A **RUNIC STONE** found at Haggerstalund, Sweden, bore an inscription to the memory of two men who died in Greece. It is especially important from the mention of that country.

A GAULIC CEMETERY has lately been discovered in the Faubourg St. Germain, Paris, containing fifty-two tombs, with skeletons—men, women and children. Only a few of the skeletons were male. Swords, lances, shields and implements of bronze and iron were also found.

DR. FLORCHUTZ has lately investigated two prehistoric German sacrificial stones, one near Staden under Nidda, and the other on the great Felberg in Taunus.

In a turf-moor near Calbe, some five feet below the surface, were found a number of old bones and bone-harpoons, artificially sharpened, pointed and polished. The weapons were similar to those used to-day by natives of a low type of civilization.

DR. PARIS lately explored a number of tombs at Luxei (Haute-Saone), finding only three in which skeletons still remained intact. One of the skulls had been trephined in the right portion of the frontal bone, and the operation seemed to have been done by scraping with a curved instrument. A stop was put to the work of the learned antiquary on the pretext that he was giving offense to the religious sentiment of the community.

LATE ITALIAN DISCOVERIES.—Excavations in Bologna near the Church of S. Apollinaris brought to light a number of remains, first of Christain tombs, then of a Roman era, and below all, objects of a very great antiquity, with indications of extremely ancient habitations.

In Orvieto excavations in the Valsenian necropolis have resulted in the discovery of many Etruscan inscriptions.

At Rome in the ancient necropolis of the Esquiline three new tombs beneath a virgin soil covered with shapeless masses of tufa containing bronze rings and fibulae and a few vases of a *Latian* type.

In Curti a new *Oscan* inscription.

In Pompeii a number of surgical instruments, including *uterine specula*.

At Brindisi a female statue inscribed *Mercellia Festa*.

At Syracuse a small rectangular edifice adorned with columns, supposed to be the remains of the sanctuary of the nymph *Ciana*, spoken of by *Diodorus Siculus*.

At Buffalora a number of antique amulets presenting the emblems of many divinities.

LATE GERMAN DISCOVERIES.—At Nimlau, near Olmutz, on the occasion of draining a lake have been found the remains of Lacustrian Pile-dwellers at a depth of 50 cm., surrounded by a system of oak log fortifications running from southwest to northeast tied together with withes.

A Jadeite axe has lately been found in Mahren, a locality where nothing similar had ever been discovered. It is small and flat and sharpened, is 56 mm. long, 28 mm. broad and 9.5 mm. thick; weighs 22,113 g. The upper surface is finely polished and unevenly colored.

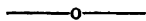
In the Steiermark valleys many valuable archæological finds have been made and it is considered to represent an almost undeveloped field, rich for the future explorer.

Explorations have been made at Burgstall near Oedenberg in five tumuli, resulting in the finding of many interesting objects supposed to relate back to the earliest prehistoric inhabitants.

M. BONNEMERE read before the Parisian Society of Anthropology, on April 21, 1887, a paper on "Serpent Stones," in which he referred to *Anquinum Ovum* carried by the Druids as a mark of their high office. He stated that the superstition as to these stones and their value was still extant among the modern Bretons. He stated one peasant had given an acre of good land and another a fine pair of oxen for one or two of these wonderful stones.

M. EMILE RIVIERE has lately discovered at Chaville, France, a large quantity of cut flints worked by the hand of prehistoric man. So numerous are these remains that in one day he obtained over 300 specimens, good and bad, broken and whole. No human or animal bones were found at this prehistoric workshop.

DOLMENS IN SOUTHERN RUSSIA.—Mr. Felitzin has recently been exploring the dolmens in the Tcherkess country with interesting results. They are generally of a uniform construction—a flat slab supported on four upright stones, presenting the effect of a large table. Two of the sides are long, and the other two short. Beneath them have been found spiral bronze rings, arrowheads of flint and bronze, bronze heads, cowries, red ochre, etc. The age is generally considered very remote. M. Felitzin lately reported in detail his explorations to the Archaeological Society of Moscow.



#### BOOK REVIEWS.

*Pre-History of the North, Based on Contemporary Memorials.* By J. J. A. Worsaae. Translated, etc., by H. F. Moreland Simpson, M. A., London. Trubner & Co., Ludgate Hill. 1886.

This is a very suggestive book. It gives the sub-divisions of the stone age, bronze age, iron age, and brings down the history of the north, from the earliest period, 3000 B. C., to the Viking times, 1000 A. D. The author does not claim extreme antiquity, but thinks that Europe did not receive its first population, before the human race had spread extensively elsewhere. The stone and bronze age prevailed in India, China, Assyria and Egypt or Scandinavia. The same strata of ancient culture may be recognized in Japan, the South Sea Islands and America. But the author thinks that they spread from India, east and north. The Kitchen middens of Denmark contains the earliest tokens of the presence of man. Not a trace of the paleolithic age or the stone age called the "Mammoth or Reindeer Period" has yet been revealed. Rude stone objects identically similar are found in the shell heaps of America, Japan, and cave and coast finds of south Europe, but not the least trace of a fuller development or change in ornamental objects. One thing is noticeable, so vast a quantity of useful and unused implements, weapons and relics found in the refuse heaps, mingled with charcoal, animal bones and potsherds, would indicate either the burial of their implements with their dead, the burning of their bodies, or the offerings of these implements to their Gods. The arctic group in the European stone age was introduced by Laps and Finns, but may have been later than the Kitchen middens. It was separated by glacier covered fields and impenetrable forests, The stone graves introduced the later stone age. These can not compare in size and decoration with many of the monu-

ments of western Europe. The implements and relics found in them were not of so high a type, but they may have been introduced from the south of Europe. A sharp contrast is seen between the earlier and later stone age. The examination and comparison of the unburnt bodies laid in the stone graves have as yet failed to show the particular race to which we should ascribe these structures. The stone graves are very numerous in Scandinavia. They were followed by or mingled with barrows and giant chambers, which are to be distinguished from the stone graves, as these latter have loose lids of flat slabs, but the chambers have long passageways for their entries. The giant chambers, made of colossal stone, always flat on the inner surface, with long entrances of stone settings, have been observed in the southern parts of Scandinavia and in Denmark. They resemble those found in Brittany and Ireland, but they are supposed to be allied to the bronze age. Under the pressure of heavy superincumbent weight of the barrow, they have survived the lapse of years. Some of these are filled with bones, as if there had been a bone burial. They are packed from floor to roof and show an extensive population. There are nests and rows and circles of flint and ground stone relics in Scandinavia as in America. The supposition is that these were offerings. Cup-shaped depressions and representations of "footprints" are also found there as well as here, also animal carvings, amulets, and rondelles from trepanned skulls, showing that the same superstition prevailed there as here. Curved, crescent-shaped knives fixed with their ends down, in circles of various size, found in meadows, pieces of amber in pots placed in bogs, as well as deposits of stone axes laid in sand, indicate that aboriginal commerce and relics and treasure-troves were common. The bronze age is divided into the earlier and the later. This does not interest the American student as much as the stone age, and yet the author's remarks on the use of metal, and especially that of copper, are very suggestive. There was a copper age in this country, but not in Scandinavia. The copper age preceded the bronze age in Switzerland and Central Europe, but did not reach the north. Prof. Worsaae maintains that the form and ornamentation of the bronze relics was imitated in amber and ivory before the bronze itself became common. He accounts for the similarity of form in relics, both during the bronze and stone age, to borrowed ideas, the result of intercourse among the races, and not to evolution or natural development. The book is very instructive and will be sought for by American readers.

*Fossil Men and their Modern Representatives.* J. W. Dawson, LL.D., F. R. S., F. G. S. Dawson Brothers, Publishers, Montreal.

We are happy to call attention to this book, even if it is seven years since it was first published. The modern representative of fossil man chiefly spoken of, is the village of Hochalega, near Montreal. This village was described by Cartier in 1535. It disappeared, but was re-discovered in the process of extending the city of Montreal westward. This is the strange part of the story. "In a century or less its site is covered with a dense and tall young forest. This is cleared and again becomes cultivated fields showing no trace of former occupation. In three centuries the remains, when disinterred, are veritable fossils; everything perishable, even hair and the animal matter of bones have disappeared—nothing remains but stone and

pottery, and charcoal, and the mineral matter of bones, which underground might remain for a hundred centuries as for one" There were some interesting objects exhumed from the site. First the pottery. This was ornamented with different patterns, which the author designates as follows: a, basket; b, net; c, corn ear. Some of the pieces of pottery have handles in the shape of human heads, on the inside of the vessel, and the explanation given by the author is, that this was in order to protect the cord or bark rope, by which the vessel was suspended from the fire outside, and so prevent the vessel from falling with its contents into the fire; a very reasonable explanation. Earthen pipes were found; these resemble the pipes which have been exhumed in western New York, and they may have been received from the Iroquois who inhabited New York. The typical Mound-builder's pipe does not seem to have been exhumed at Hochalega. The figure of an owl's head, remarkable like those found in the ruins of Troy, occur on many Huron pipes. This introduces the subject of the similarity of ornaments. The geographical distribution of pipes of different patterns would be an interesting study. Sir William Dawson discusses the question whether paleolithic man was ignorant of pottery? He mentions the village site at Soloutre, near Moustier, France. The great depths of the beds of debris and their stratification and layers indicate a long term of residence, and it would seem that the remains of the mammoth and other extinct animals extend throughout the whole. Enormous numbers of wild horses were buried here. It is unknown whether they were driven over the face of the precipice by hunters or were slaughtered for food by the people. The dead were buried under hearths or fire-places, very much as the Greenlanders and some of the tribes of Mound-builders buried their dead. Dr. Dawson says that the flint weapons are of the paleolithic type characteristic of the river gravels, while other implements and weapons are as well worked as those of the later stone age. This is not the only place where different horizons are found, though it is not often that the same deposits will connect ages which are ordinarily so widely separated and fuse them into one. The doubtful part of Dr. Dawson's book is that chapter in which he speaks of the "Migration of the Races" Algonquins, Alleghans, Toltecs, etc. It would have been better to have given authority for the assertion that the Algonquins in their migration entered America from the Equatorial Atlantic and passed north. The common opinion is that they came from Behring's Straits, though Charles G. Leland maintains that the Abinakis and Micmacs derived their traditions from the north of Europe and hence that the Algonquins may have come from that region. What authority is there for saying "that the Hochalegans were the last survivors of a race which was declining, and that was wedged in between the Iroquois and the Algonquins and ancient Alleghans? The "resemblance of the old Alleghans to the Toltecs or primitive Mexicans" is imaginary. The eye is deceiving when it undertakes to trace race resemblances on pipes, pottery, vases and monuments. We could prove almost any nationality in this way. The communistic style of living is spoken of, and we conclude that the Hochalegans were like the Iroquois in this respect. Whether all native tribes erected their houses in this way is a question. It is well for the archæologist to take up a book like this occasionally and go over the points, for the variety of thought and opinion expressed in it will be an ad-

vantage, even if one does not accept the positions. Dr. Dawson has a broad scholarship, and always lifts the reader to a higher outlook and a more comprehensive view, and yet is sufficiently accurate in the details to be regarded, in the main, as reliable authority, though archæology is not his special department.

*Ohio Archæological and Historical Quarterly.* Vol. I, No. 3, December, 1887.

The March number of this quarterly has not yet come to hand. The December number was the last one we have received. The society has a work to do in arranging for the centennial celebration of the settlement of the northwest territory. We shall hope to receive during the coming year some valuable papers which may be secured in connection with the celebration. The December number contains three articles on prehistoric archæology, as follows: Pre-Glacial Man in Ohio, G. F. Wright; Ft. Hill, H. W. Overman; Ancient Work near Oxford, R. W. McFarland; Bibliography of the Works of Ohio, by Mrs. Cyrus Thomas.

*American Journal of Archæology and a History of the Fine Arts.* Vol. III, Nos. 3 and 4. July to December, 1887.

This magazine is more than three months behind time, though it is a double number. Among the contents we notice especially the following articles: The Egyptian Origin of the Ionic Capital, by W. A. Good-year; Greek Inscriptions, by A. C. Merriam; A Silver Patera, from Korea Notes, by Allan Marquand; Notes on Oriental Antiquities, by William Hayes Ward, D. D.; Antiquities of Southern Phrygia, by W. M. Ramsey; The Old Fort Earth-works of Greenup County, Kentucky, by T. H. Lewis; Correspondence by A. L. Frothingham, Jr. These with the archæological news and summary of periodicals constitute a massive pamphlet of 287 pages; the whole volume 531 pages. Price \$5.00. For classic archæology nothing can be better than this journal. The editors are well up in their departments and the contributors are all gentlemen of the finest scholarship.

*Proceedings of the Academy of Natural Science at Philadelphia.* Part III. December, 1887. Editor, Edward J. Nolan, M. D., Pennsylvania.

This number contains an article on the post cretaceous deposits, by Prof. A. Heilprin. He speaks of the "faunal brake," between the post tertiary and the upper member of the tertiary series, the pliocene. Here as has frequently been claimed, we have the first evidences of the man, associated with the remains of a remarkable series of large edentate animals, megatherium, milodon, megalonyx, glyptodon, foreign to the earlier faunas. He says "positive proof is still wanting, but it is practically certain that man existed during the close of the tertiary period." Nothing can be more illogical than this assumption. The "post pliocene," which includes the "pleistocene," the "glacial" and the "recent," may well be separated from the tertiary. The value of the faunal element in geological chronology is however in point. He does not reach results, but only suggests the thought that this fixes the position in time which the formations occupy throughout the entire world, the chronology in one country presumptively forming a basis for all. The Vaux collection is in the museum of this academy. The archæological specimens in this collection number two thousand nine hun-



dred and forty. The Morton and Meigs collection of aboriginal crania is also in this museum, the most instructive of all ethnological collections in the United States.

*Transactions of the New York Academy of Science.* Vol. VI. 1886-1887. Hermann Fairchild, New York.

This society entertained the American association at its last session most royally. New interest will be felt in the academy and its members on that account. The transactions contain an article on Jade and Jadite by Geo. F. Kunz, in which he describes the Jadite adz discovered in Oaxaca, Mexico, which was exhibited at the meeting of the association. The following are the specimens of Jade which Mr. Kunz seems to have had on exhibition at the time of reading the paper: A green Jade wedge from New Zealand; two Jade celts from the Guano islands; four Jade celts from New Zealand; a nephrite from Silesia; carved jades from China, including a pebble hollowed out for a snuff bottle; a polished Jade from India; a series of imitations of Jades from Burmah; casts of the most famous Jade objects from the European museums. Mr. Kunz is an archaeologist as well as mineralogist, and his articles are always very instructive. Dr. N. L. Britton has an article on the geology of Staten Island, which contains some suggestive thoughts in reference to the glacial drift and the terminal moraine. Dr. D. G. Brinton is now professor in the university, and the probability is that ethnology and archaeology will receive an impetus from him.

*The Geological and Natural History Survey of Minnesota—Fifteenth Annual Report.* N. H. Winchell, State Geologist. St. Paul Pioneer-Press Company. 1887.

*Bulletins Nos. 2, 3, 4, Geological and Natural History Survey of Minnesota.* St. Paul Pioneer-Press Company. 1887.

The report contains an interesting monograph on the Minnesota geographical names derived from the Chippewa language by Rev. J. A. Gilfillan. This with the monograph prepared by Prof. Williamson on the names derived from the Dakota language make the list nearly complete. It is a most excellent thing to do, and we are glad that the Minnesota Geological Survey has had the wisdom to do it so thoroughly and so well.

*Journal of the Cincinnati Society of Natural History.* Vol. X, No. 4. Cincinnati. January, 1888.

We learn from this journal of the death of Walter A. Dunn, a gentleman who had contributed much information on the archaeology of the region. Resolutions were passed by this society January, 1887, recommending and requesting the legislature to purchase the "old fort" or Ft. Ancient in Warren County, a resolution which by all means should be carried out. Mound Cloth and a mound near Circleville are spoken of in the January number. The museum contains some specimens which can not be found in any other collection. Among the additions to the library are many archaeological pamphlets.

—o—

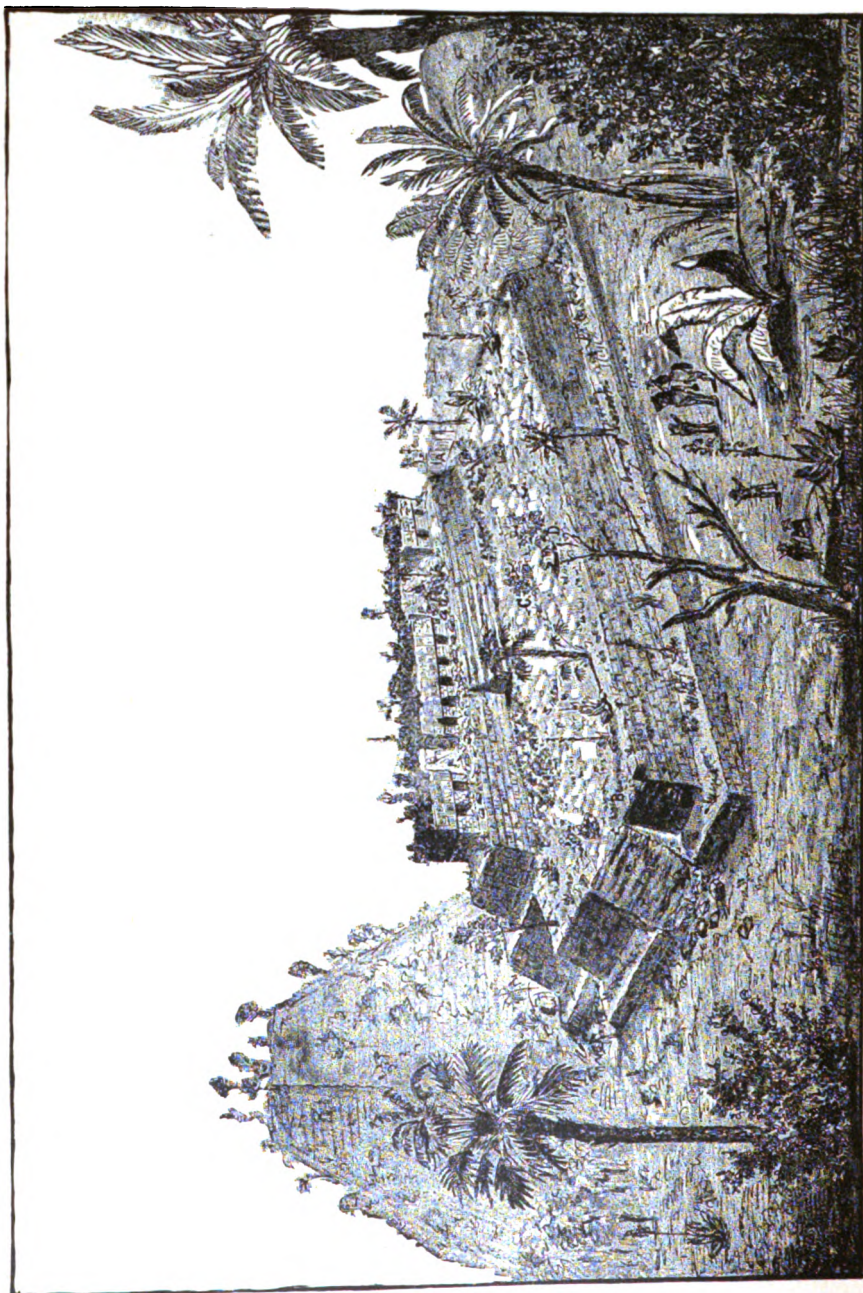
#### BOOKS RECEIVED.

*Les Premiers Ages du Metal dans le sud-est de L'espagne par Henri et Louis Siret Ingenieurs.*

*Mittheilungen Anthropologischen Gesellschaft in Wien. XAII. Band, III. and IV. Heft.*

*The Nomads of the Sea. Notice of a coming book, by Dan'l M. Tredwell, reviewing the Atlantic Theory.*





TERRACED PALACE, GOVERNOR'S HOUSE AT UXMAL.

THE  
*American Antiquarian.*

VOL. X.

JULY, 1888.

No. 4.

MYTHS AND LEGENDS OF THE ÇATLOLTQ OF VAN-  
COUVER ISLAND.

[PRONUNCIATION—k, a guttural k, similar to kr; q, the German *ch* in *bach*; ç, *th* in *thick*; c, *sh* in *shoe*; tl, an exploded l.]

The Çatloltq are the most northern one among the tribes belonging to the group which I call the Coast Salish. They are called Xomoks by the tribes of Kwa'kiutl lineage, and live at the present time in Comox, a place on the east coast of Vancouver Island. During the eighteenth century they occupied the coast of Johnson Strait as far as Qúsam (Salmon River), but after continued wars with the Lékwltoç, a group of tribes of Kwákiutl lineage, and the total extermination of several allied tribes who spoke the same language, they wandered southward and joined the Pentlatc, in whose territory their present village is situated. The language of the Pentlatc belongs to the same stock to which the Çatloltq belongs. Of the former tribe only two or three families are extant, who have intermarried with Çatloltq. Therefore it is somewhat difficult to determine which customs and legends originally belonged to the Çatloltq and which to the Pentlatc.

The customs of the Çatloltq very much resemble those of the Lékwltoç, and it is evident that they borrowed many usages from the latter tribe. In the following pages I intend to relate several myths and legends of the Çatloltq and to point out their similarities to tales of neighboring tribes.

THE LEGEND OF KUMSNÖOTL.

Kumsnöotl (i. e. our elder brother) descended from heaven and wandered all over the earth, accompanied by Pa (the raven), Káiq, (the mink), and Tséceletl, (a small bird). Once upon a time they met a man called Xoälawáisit. He knew that Kumsnöotl would come to his house and wanted to kill him. For that

purpose he made a large pile of wood in his house and invited Kumsnōotl and Pa for dinner. When they had entered the house he lighted the fire and threw both his guests into the roaring flames. Kumsnōotl, however, slipped into a log and prevented its catching fire, although the wood was ablaze all around it; the raven made his escape through the smoke hole. After the fire had burnt down, Kumsnōotl left the log in which he had been hidden; he threw a magic herb upon Xōalawāisit, who was transformed into stone.

And Kumsnōotl pursued his way. At Qúsam (Salmon River) he met Çoçēnēus, who was covered all over with mouths, and laughing incessantly, made as much noise as though hundreds of men were talking and laughing. When Kumsnōotl saw him he said: "It is not good that you make so much noise," and transformed him into a stone, which may be seen at Qúsam up to this day.

He pursued his way. After a short while he met a man called Kōma (*Gadus* sp.), who was a mighty sorcerer. Kumsnōotl said unto his companion: "Don't let us approach him; I am afraid of him." Then Kōma laughed and said: "Why are you afraid of me? Is it because I am a mighty sorcerer? I do not hurt anybody, I only enjoy the fine weather." Kumsnōotl, however, who feared some mischief, flung him into the sea. He transformed him into a fat fish with a short tail, and said: "As you have been a mighty sorcerer man shall use you for curing the sick." Therefore the fat of the fish is boiled out and used for medicine.

And Kumsnōotl went to Xōdjomen. There he met a woman who sang to the mountain Kōkuanan, which is near by: "Oh, move aside that I may look past you. My cheeks are sore with the tears that have run down them, for sorrow that I cannot look past you." When Kumsnōotl arrived the mountain Kōkuanan was ashamed of its unkindness and moved aside.

After having travelled a while Kumsnōotl reached a place where a monster of the shape of a huge squid lived in a lake. It devoured every person who dared to fetch water from the lake. All the people had died of thirst. An old man and his grandson were the only survivors. Every day the old man went to the Island of Mitlnatc and caught a supply of red cod. He boiled out the fat and they used it instead of water. When Kumsnōotl heard of these events he resolved to kill the monster. He ordered his companions to start a fire and to throw flat stones into it. After they had become red-hot he put one upon his head for a hat and covered his whole body with the others. Then he took a bucket, descended to the lake and played in the water to attract the monster's attention. It rose at once to the surface and stretched out its long arms intending to drag Kumsnōotl into the depths, but as soon as its suckers touched the red-hot

stones they fell off. When the squid discovered that it could not overcome Kumsnōotl it jumped upon his head and it had almost conquered him. The hot stone, however, which Kumsnōotl wore on his head, saved him and killed the monster. Kumsnōotl cut it to pieces and threw the latter into the sea speaking: "As you have eaten men, henceforth men shall eat of you." They were transformed into squids. He flung the stomach upon the land where it was transformed into a large boulder; the head he sunk into the sea near Cape Mudge, where it still produces dangerous whirlpools and rapids.

And Kumsnōotl took his paint pot and painted all men with gay colors and transformed them into birds. While he was thus occupied Pa cried: "Oh, that is nice, paint me too, but I want to look gay and pretty." Kumsnōotl got angry and painted him all black. Therefore the raven is black.

At that time the tide flowed always in the same direction through Seymour Narrows. Kumsnōotl made it turn twice every day.

All tribes of Vancouver Island have legends similar to this one. The Kwākiutl tell of Xanikila, the wanderer, the Son of God; the Cowitchin of Qāls, the great transformer; while among the Nitinat his name is Alis. I have treated of these traditions at another place (*Globus* 1888, No. 10), and a comparison of the various myths shows that almost every single adventure of the Xanikila of the Kwākiutl is also told of Kumsnōotl. I heard two exploits of the latter told by the Čatloltq, which, however, I did not tell here, as they are identical with the respective tales of the Kwākiutl. They refer to the origin of the deer and of the grouse. There is one important difference between the legend as told by the Cowitchin and Čatloltq, and as recorded among the Kwākiutl. The former consider him as the Deity or as the son of the Deity who wandered all over the earth and returned to heaven; the latter also believe that he is a son of the Deity who came from heaven and reached the earth at Cape Scott. But, at the same time, they consider him the ancestor of a gens of the Nakóm-kilis, a tribe of the Kwākiutl. In this respect the information I received differs from that of Dr. Dawson,\* who says that Xanikila was not the ancestor of any gens.

It is very remarkable that the raven and the mink should be Kumsnootl's companions, as the former is the creator of the tribes of the northern part of the Northwest coast, while the latter is considered the son of the sun by the Kwākiutl. Evidently, the fact that they accompany the Deity on his wanderings is due to an influence of these ideas of the northern tribes. James Deans, in the March number of this journal, asserts that the Cowitchin

---

\**Transactions Roy. Soc. Can.*, 1887.

also consider the raven the creator. I cannot confirm this information. After a very thorough inquiry among the Çatloltq, Pentlatc, Snanaimuq and Cowitchin I found that a few men have heard the legend told by the neighboring tribes, but that it does not belong to their own mythology. As all the southern tribes called the sun the Deity, it is evident that the legend of the sun as created by the raven cannot form part of their mythology.

I heard the following sun myths told by the Çatloltq.

#### THE GUM AND THE SUN.

A long time ago the gum was a blind man called Momhānātc. As he could not endure the heat of the sun he fished at night. Early in the morning, when the day began to dawn, his wife called him saying: "Come home, the sun is going to rise." Thus he returned before it grew warm. Once upon a time his wife slept too long, and when she awoke she saw that it was daylight. She ran to the beach and cried: "Oh Momhānātc! come home, the sun is high up in the sky." Momhānātc hastened to reach home but it was too late. The hot rays of the sun made him melt ere he was able to reach the shore. Then his two sons were sad and they said unto one another: "What shall we do? We will avenge the death of our father." And they resolved to climb up into the sky and to kill the sun. They went to the place where the sun rises and began to shoot their arrows toward the sky. The first arrow stuck in the sky. The second arrow hit the notch of the first one and stuck in it. Thus they continued until a long chain was formed reaching from heaven to earth. The elder brother shook it to test its strength. When he found it safe and sound they climbed up to heaven. After having reached the sky they killed the sun with their arrows. Then they thought: What shall we do next? And the elder brother said, "Let us become the sun," and he asked the younger one. "Where do you intend to go?" The latter responded: "I will go to the night, go you to the day!" and the younger one became the moon, the elder one the sun.

Here is another tradition referring to the sun. I shall tell it in two different forms. The first I obtained from a woman, the second from an old man.

#### TLAIX.

There was a mighty chief in heaven named Tlaix. He had two beautiful daughters and many youths came to woe them. Tlaix, however, killed all their suers. At the same time there lived a mighty chief on earth, called Aiēlen (i. e. fair weather), who had two sons. Early in the morning the youths used to go into the woods, and when their father asked them what they were going to do there, they said that they wanted to light a large fire. But they did not speak the truth. In reality they dug out

fern roots and ate them. At last they had eaten so much that the fine roots began to grow out of the interstices between their fingers. When Aiēlen saw this he got angry and said: "Do not waste your time with useless occupations. You had better go and marry Tlāix's daughters. Don't you know that all youths woo them?" Then the brothers took their bows and flew arrows against the sky. Thus they made a chain reaching from the sky to the earth. The elder brother shook it in order to try its strength. When he found that it was firm and strong the youths climbed up and having crept through a hole in the heavenly vault, found themselves in Tlāix's land. They found a trail which they followed, and while wandering they spoke unto one another: "We will marry Tlāix's daughters and make him ashamed of himself." Aiēlen thought his sons were dead, and he cried with grief.

After the young men had gone a short while they met a number of blind women who sat around a fire and cooked a meal of young sprouts (*peṛcin*). When the meal was ready one of them distributed it among the rest. The elder brother stepped upon her blanket while the younger took the full dishes from her hands and put them in the fold of his blanket. When the woman had distributed all the food she asked her companions: "Have you all had your share?" They replied: "No, you did not give us anything." Then she knew that somebody had taken the dishes from her and she said: "A stranger must be here who took the dishes out of my hand," and all the women said: "Oh stranger, have mercy upon us, take the blindness from our eyes." The brothers chewed certain roots and spit into the eyes of the women. Then their eyesight was restored; they were transformed into ducks and flew away. The one alone, upon whose blanket the young man had stepped, was unable to fly away. He asked her: "Where is Tlāix's home? We want to marry his daughters." The duck replied: "Tlāix is a bad man; he kills all the suers of his daughters. If you really intend to marry them you had better see your grandfather first. He will give you medicine that you may not be conquered by Tlāix."

The youths followed the duck's advice. They went on and arrived at the house of their grandfather Pacin (Oneleg, the crane). As he was not in they went in search of him. On their way they met the snake and took its blanket. When they descried their grandfather standing at a brook, where he was fishing, they assumed the shape of salmon by putting on the blanket of the snake. They swam to the place where their grandfather stood holding his harpoon ready for flinging it. When they came near him they stopped swimming. As soon as he saw the two salmon he flung his harpoon at them, hit both with a single stroke and pulled them on shore. While he turned around to get his fish club, intending to kill the fish, they trans-



formed themselves into his grandsons and laughed heartily as they had thus deceived their grandfather. "Oh, my grandsons" said Pācin, "where do you come from, where are you going?" "We want to marry Tlaiḡ's daughters," replied the youths. "Then accompany me to my home, that I may make you strong," said Oneleg. He led the way and the young men followed him. When they arrived he said: "First, Tlaiḡ will offer you a porcupine for a seat. Sit down on this stone that you may be able to stand the test." Thus speaking he let them sit down on a slab of slate, and their seats were transformed into stone. He anointed their bodies with the juice of a magic herb, and threw a black stone (*mesais*, basalt) into the fire, and when it had become red hot he pulled it out with a pair of tongs and placed it into the mouths of the youths. Before doing so he had ordered them to make a quick jump as soon as he would let go the stone. They obeyed, and the stone fell through them without doing any harm.\* \* \* \* He showed them the way to Tlaiḡ's well and told them that they would find the girls there.

Here they climbed a tree and sat waiting on the branches. After a short while the girls came out of the house singing: "Not Tlēqēlen's (Bad weather) sons shall be our husbands, Aiēlen's sons shall come and marry us." The young men were very glad when they heard this song. On the following morning the girls again came to the well to fetch water. When they stooped they saw the images of the youths in the water and they began to cry, as they believed they were dead and lay on the bottom of the well. One of the youths spit into the water to attract their attention, and now they saw the two young men sitting on the branches of the tree and their hearts were glad. The youths jumped down; the elder one took the elder of the sisters, the younger the younger, and they went together into the house.

\* \* \* \* \*

They reached the house and Tlaiḡ offered them a porcupine for a seat. As their seats were of stone they were not hurt. Then he put some red-hot stones into their mouths. They gave a high jump, as their grandfather had taught them, and they were not hurt. The hearts of the girls were glad when they saw that Aiēlen's sons had stood the test. In the night the young men made the girls bite the wedges and then turned out their teeth.\* \* \* \* When, on the next morning, Tlaiḡ found that the youths were still alive, he got very angry and resolved to do away with them in some other way.

He had hewn down a tree and was engaged in cutting it into

---

\*The stars take the place of certain expressions which are not suitable for publication.—EDITOR.

boards. One day he asked his sons-in-law to help him. They, however, suspected his bad intents and went first into the woods to their grandfather, Tamtam (a bird), and asked him for his blanket. He gave it to them. This and white and red paint they took along to the tree. When they arrived they saw that Tlaiḡ was about to split the tree by means of wedges. He began to ram in a new wedge and suddenly he let go his stone hammer which fell right into the open crack. He asked the youths: "Oh, crawl in there and get my hammer." They did as they were bidden. As soon as they had entered the crack Tlaiḡ pushed out the wedge, and the tree snapped together with great force. The youths, however, put on Tamtam's blanket and flew away in the shape of birds, while they left the paint in the tree. The latter oozed out of the crack, and Tlaiḡ believed it to be the brains and the blood of the youths. He returned home full of joy that he had killed his sons-in-law. What was his surprise when he found them sitting safe and sound by the side of the fire. He was deeply ashamed.

And he thought again and again, how he might be able to kill his sons-in-law. Early one morning he flung his dog into the sea and transformed it into a diver. Then he called the young men, who were still asleep, and said: "Come here and catch yon bird." The brothers took bow and arrows, ran to the beach and shot the diver. But, although they hit him again and again, they were unable to kill him, and he gradually swam away from the beach. Tlaiḡ said: "Launch your little boat and pursue him. You will easily get hold of him." They obeyed him and pursued the bird, which led them far into the sea. Then Tlaiḡ summoned the wind and a heavy gale arose which threatened to destroy the boat. The youths, however, began to sing and beat the time on the gunwale. At once it was calm and fair all around the boat; for they were Aiēlen's (Fair weather) sons. They returned home and, although the gale was raging furiously, calms prevailed wherever their boat went.

The youths resolved to take revenge upon Tlaiḡ if he should attempt again to harm them. The next morning Tlaiḡ called them: "Come along, we will go red cod fishing." The young men first called upon their grandfather, Xúlsxuls, (a diver), and borrowed his blanket. Besides this they took along some gum which they moulded into whales, sharks and sea-lions. When they had arrived on the fish-bank Tlaiḡ was the first to throw his hook. The young men thought: "Oh, might the hook catch the bottom of the sea." They had hardly thought so when Tlaiḡ's hook became entangled among the seaweed and boulders of the ground. Now they threw their gum into the sea and the little figures were transformed into whales, sharks and sea-lions, which played all around Tlaiḡ's boat. The young men assumed the shape of divers and returned home.

Tlaiḡ was so much frightened when he saw all this, \* \* \* that he felt very sick. He lay in the house near his fire that was burning low, as his supply of wood was well nigh exhausted. He sent his sons-in-laws into the woods to fetch fuel. They obeyed and went to see their grandfather, the woodpecker. They asked him: "Let the bark of the tree fall down." The woodpecker complied with their request and a large piece of bark fell down. They carried it home and broke it into many pieces. They gave a small fragment to Tlaiḡ's youngest son and bid him take it to his father. The boy obeyed. When Tlaiḡ saw how little it was they had given him he got very angry, for he wanted to have as much as possible for making a large fire. When his son, however, began to break up the bark, it rapidly increased and finally filled the whole house.

One day Tlaiḡ longed to have cranberries, although it was midwinter. The young men went to see their grandfather (another water-fowl) and asked him to whistle. He complied with their request, and when he whistled the shrubs began to sprout. When he continued whistling they began to blossom, and at last they bore fruit. The young men gathered a small bucketful and carried it home. Then they ate away as their hearts desired. When Tlaiḡ saw this he asked for some berries. His sons-in-law gave him a small dish full—but when he began to eat he found that the dish never became empty. At last he got impatient and flung the dish to the ground. At once a cranberry-bush grew out of his navel.

Another day Tlaiḡ asked the young men to catch the woodpecker. They went to their grandfather, the woodpecker, and when they carried him home they whispered in his ear: "Pick out Tlaiḡ's eyes, but torment him first." When they arrived in the house the woodpecker hopped upon Tlaiḡ's stomach and began picking. Gradually he proceeded toward his head continually picking him. At last he arrived at his head and although Tlaiḡ turned his head to the right and to the left to escape the woodpecker the latter picked out his eyes.

Finally Tlaiḡ wanted to have the Aihos (the double-headed snake), which was to kill the brothers. The younger one caught it and while carrying it home whispered in its ear: "Kill Tlaiḡ." The Aihos obeyed. One of its heads devoured him, beginning at the head, the other beginning at the seat. Thus he died. The brothers threw his corpse down upon the earth.

## TLAIK.

[Another Version of the Tradition.]

Two young men, the sons of Aiëlen, (Aiëlen is the name of the sun when spoken of as a human being), went in their boat to catch birds. When they had left the land far behind they commenced flying their arrows toward the sky and continued to do so until a chain of arrows was formed reaching from the sky to the earth. The elder brother rose and shook the chain. When he found it firm and strong he said to his brother: "I shall climb up into the sky. Stay you here. Do not mourn for me, but go home, climb upon the roof of the house and play and be joyful." Then he began to climb up and ere long he had disappeared from his brother's view. The latter returned home and spoke to Aiëlen: "I have lost my elder brother. I do not know what has become of him, and I fear he is dead," and all the people who heard this cried with sorrow. He, however, climbed upon the roof of the house and played and was joyful, for he knew that his brother was in the sky.

When the elder brother had arrived there he found a road leading through a beautiful level country. Far away he saw smoke rising. When he came near he saw the squid, which lay comfortably near the fire and chewed gum. The youth asked him, "Oh, give me some gum?" The squid answered: "What do you want to do with it? You cannot use the gum for your teeth." The youth, however, said again: "Oh, give me some gum and your blanket." Then the squid gave him both.

The youth went on. Soon he saw smoke rising at a distant place. When he came near he found a number of blind women sitting around a fire, (etc., see p. 205.) He asked the duck that was unable to make her escape, "Where is Tlai's house? I want to marry his daughter." The duck replied: "Follow this road; then you will find a lake in which the girls use to swim. Tlai has four daughters. Mind that you do not marry any of the elder ones, \* \* \* Marry the youngest one." The youth was glad when he heard this news and strolled on. After awhile he met the woodpecker, who gave him the same information.

Finally he reached a lake. Here he put on the blanket of the squid and thus assumed the shape of that animal. Soon he heard the girls coming and singing: "Oh, I wish the sun's son might come and take me for his wife." They arrived at the pond where the youth lay waiting in the shape of a squid. The first to see him was the eldest of the sisters, Yinisaḡ (derived from *yinis*, tooth). She became frightened and cried: "Ha! who is this here? The other sisters, on seeing him, spoke to one another: "Let us take him home. He shall be our slave. When father goes deer-hunting, he shall assist him." Yinisaḡ

tried to lift him, but the squid held firm to the ground by means of his suckers, so that she was unable to move him. The second sister and the third also tried to lift him, but they could not move him. At last the youngest made an attempt and the squid let go his hold. So she carried him to the house and deposited him in front of the door.

The girls entered the house and said to their father: "We have found a slave for you in the woods." Tlaiḥ asked: "Where is he?" "We left him in front of the house," replied the daughters. Then Tlaiḥ asked them to bring the slave in. Yinisaḥ was the first to go, but she was unable to lift him. He also resisted the second and the third, but he followed the youngest. She placed him near the fire. When Tlaiḥ and his daughters were eating salmon the girls threw the bones at him, but he accepted only those which the youngest offered him. At night time he stealthily slipped into the youngest girl's room; he threw off the squid's blanket, and now she saw that he was the shining sun. He said: "I am Aielen's son. I know you are better than your sisters, therefore I want to have you for my wife. But you shall not throw food at me as at a dog; give it to me in a dish." When daylight came on, he again put on the blanket of the squid and lay down near the fire. Again Yinisaḥ and her sisters flung fish-bones at him. He, however, did not mind them, but turned to the youngest among the sisters, who offered him food in a dish, as he had asked her. At night time he went again into her room, where he took off his blanket.

The next morning the men were going deer-hunting, and said to one another: "We will place the squid in the stern of the boat. He shall be our steersman." They asked Yinisaḥ to carry him into the boat, but she and the two other sisters were unable to lift him, while the youngest carried him readily into the boat. When they had arrived at the place where they intended to start hunting, Tlaiḥ ordered the squid to watch the boat and particularly the rope by which it was tied to the shore. Then they went hunting, and the squid remained alone in the boat. He had the woodpecker hidden in his blanket, and whispered to him: "Fly to the tops of the trees and give the deer a warning that they may run away." The woodpecker obeyed, the deer escaped and the hunters returned empty-handed. They went home. When the girls tried to carry the squid back to the house, only the youngest was able to lift him. He spent the night with her.

The next day the men went deer-hunting and took the squid along as steersman. They left him in charge of the boat, and again he sent out the wood-pecker to warn the deer. Then he threw off the blanket and sat upright in the stern of the boat. He shone bright as the sun. Tlaiḥ and the other hunters returned empty-handed. When Tlaiḥ saw the sun in his boat he became frightened. He cried: "I will give you my eldest

daughter for wife." The young man shook his shoulders and the boat moved far off from the shore. Tlaiḡ cried: "I will give you my second daughter." Again the youth shook his shoulders and the boat moved still farther off from the shore. He also declined the third daughter, but when Tlaiḡ offered his youngest daughter he shook his shoulders and the boat returned to the shore. The next time when they went deer-hunting he whispered to the woodpecker: "Call all deer hither to the sea." The woodpecker obeyed; the deer came and tumbled down the steep rocks and lay dead on the beach. While all the other hunters had not got a single deer, the young man had a full boat-load, and when the others returned he had finished dissecting his spoils.

When Yinisaḡ saw him she wanted to have him for her husband. She said: "Oh, look, mother, doesn't he look just like the sun?" and she carefully arranged her bed in order to attract him. The second and the third sister did the same thing. The youngest, however, did not mind him at all. Then Yinisaḡ and her two sisters invited him to come into the house. He, however, remained in the boat until the youngest called him. Then he took her publicly for his wife.

Tlaiḡ, however, intended to kill his son-in-law. He went into the woods to split a tree. (See p. 207. A woodpecker flies out of the crack and passes close by Tlaiḡ's eyes. He was the young man.) The youth resolved to take revenge upon Tlaiḡ, and asked his wife: "Do you know what Tlaiḡ is afraid of?" She replied: "He is afraid of whales and other large sea animals." On the next day, Tlaiḡ and his son-in-law went red cod fishing. The young man chewed the gum that the squid had given to him and put it into the sea. It was at once transformed into whales and sea-lions. (See p. 207.)

DR. FRANZ BOAS.

New York, March, 1888.

6

## EPITOME OF PREHISTORIC ARCHÆOLOGY IN WESTERN EUROPE.

### FIFTH PAPER.

#### EUROPEAN EDUCATION IN ANTHROPOLOGY.

I have already remarked that the public interest in prehistoric anthropology was greater in Europe than in the United States. I have mentioned the number of societies organized, the governmental and municipal, as well as private museums, are greater there than here. I also remark the greater number (apparently) of individuals paying attention to the science. Judges and lawyers are more ready to spend their vacations in this pursuit. The medical fraternity are more interested in this science in Europe than in the United States. The priesthood number some of the most ardent anthropologists, while tradesmen, and even the peasant tiller of soil, have a knowledge of the implements of the prehistoric man which is gratifying to the foreigner.

This public interest manifests itself first in the attention to, search for, and recognition of the implements, and evidences of the existence of the prehistoric man; and, second, that these evidences are not so much for curiosity as for use in the scientific study of the man himself. A marked difference in the two countries in regard to this science, is that in Europe the public interest is attracted towards the existence of the man of much greater antiquity than seems to be the fashion in the United States. The man of the paleolithic age attracts most attention and gives most interest in Europe, while in the United States he seems to have been neglected by the scientific world, except by a party almost insignificant in number. Even more: the question of man in an earlier epoch, called the *Eolithique*, during the tertiary period has occupied much time and been a serious topic in the discussions of the International Anthropological Congresses from 1867 to 1880, and of the last three meetings of the French association for the advancement of science. The European governments also take more—I will not say greater—interest in the science. The United States government maintains the scientific institutions at Washington in an entirely worthy and not a belittling manner, but the European governmental interest is manifested in their attention to details. Thus in their laws for the purchase and protection of monuments; in their establishment and purchases for

museums; in their aid to private societies; in their sending into foreign countries commissions intended to study their archæology and anthropology.

Not as a list, but taken at hazard and as illustrations, I may cite the following: Denmark sent Dr. Müller to Greece and Russia in 1881; Germany maintains her Archæologic Institute permanently at Rome, and principally the scientific school at Naples; England sends Mr. Theodore Bent to the islands of the Grecian Archipelago.

France organized in 1876 a commission, under the minister of public instruction and beaux art, on voyages and missions, scientific and literary. This commission is composed of forty-six members, renewable each year. Permit me to give a list of the scientific missions sent out from France by this commission in the year 1884-5, viz.: M. Doctor Poussie, to Australia and India, to make studies in ethnography and natural history; M. Doctor Le Bon to India, to study the primitive architecture; M. Paul Roud, to Lake Copais to gather scientific collections destined for the government; M. C. Robat, mission scientific in Russia, Lapland and Spitzbergen; M. Jules Monsier, archæologic researches in Caucasus; M. Brau de Saint-Pol-Lias to Malacca and Sumatra, to study and make collections in ethnography and natural history; M. E. Gauthier to Turkey in Asia and to Persia, for researches in natural history and anthropology.

It will be inutile to continue this list through the subsequent year—they would be much the same, and I only give such as I have as illustrations of the interest taken by the governments in these scientific matters.

Mr. E. Cartailhac has just published his report of his mission to Spain and Portugal in 1880-81 to examine and study the prehistoric ages of these countries and compare them with those of France. It forms a beautiful volume of 348 pages, 400 engravings and 4 full page planotypes. The result of Weier's mission to Peru has also just been published in an equally beautiful and complete volume.

The United States maintains her geologic survey and bureau of ethnology, and sends parties of scientific explorers each year among the Indians to the far West, and possibly to Alaska. But these are all within our own country, and the United States is bound to do it, while the European governments send their exploring parties to foreign countries. I am informed that even in our own country, especially Alaska, some European governments, notably Germany, are our most persistent and determined competitors, and oftimes winners, in obtaining information and in purchasing ethnographic material.

I do not say these things invidiously against my own country, nor yet am I influenced by that most detestable fashion prevailing in some quarters, of lauding everything foreign, because it



is foreign. I would tell the plain truth, and while, I trust, not puffed up with vain boasting of my own country, I hope I have enough good sense to see that we are not possessed of *all* the virtues, and so I think we should be willing to obtain whatever of benefit we may from the examples of foreigners whenever we can.

Our country may be younger and not so well settled or studied as the foreign countries, but I hope we are past pleading our youth as an excuse for any shortcomings, real or imaginary. We are old enough, mature enough, rich enough, and have enough of talent, capacity, and good taste, that we may fairly and without arrogance aspire to be the equal of any nation on earth, whether in politics, law, literature, science, or even in art. And to finish this idea, I wish to place on record my testimony in favor of the good work done by the government institutions at Washington, as well as the private organizations and museums throughout the country. They have an opportunity to study the archæology of our prehistoric peoples, who with their tribes, customs, languages, etc., are now fast passing away, and as this opportunity exists it becomes a duty, and this duty performed becomes a credit, an honor; unperformed, becomes a disgrace. All honor to those persons, societies and institutions which are engaged in the performance of this duty.

France has had for many years a commission of thirty or more members for the care and preservation of historic monuments and the purchase, if need be. The Society of Anthropology at Paris, in 1878, took the initiative to procure a like commission for like purposes with respect of prehistoric monuments. M. Henri Martin, sénateur, was then president of the society, and to him was confided the care of the project. He was successful, and a commission of members was appointed, some of whom were named by the society, of which Mr. Henri Martin was president, which position he held until his death. M. de Mortillet succeeded him. The report of this commission has been made to the legislature and a list of prehistoric monuments given of which the commission recommended the purchase. These monuments are given in detail, which I have summarized, viz: 140 menhirs, 198 dolmens, 25 cromlechs, 11 alignments, with polishing stones, *allees couvertes*, etc. The needed appropriation was voted by the senate and deputies, and the law promulgated in the journal officiel, March 31, 1887. The differences in public interest between that country and our own may be easily imagined by the reader if he will suppose the difficulties and distance to be overcome before our Congress would pass an appropriation for the purchase of say 400 or 500, of the mounds, tumuli, and other prehistoric monuments in which our country is so rich. Yet the danger of their destruction and disappearance and the need for their purchase and preservation is even greater in our

country than in Europe. Ours are more in the nature of earth-works, while theirs are more stone—ours are more fragile, while theirs are more enduring. Our American prehistoric monuments, mounds and tumuli will have been leveled with the earth and so disappeared from its face as that their sites will be unknown long before our country will have passed through the 2,000 years of civilization of the European countries. So I say our needs and our danger are greater than theirs.

#### STATESMEN ANTHROPOLOGISTS.

Pushing my illustrations of the greater interest manifested in Europe than in the United States in the science of anthropology, let me name a few persons, as they come to me by recollection, illustrious anthropologists in Europe who have filled and yet fill high political stations in their respective countries. Worsæ I have mentioned as one of the cabinet ministers to the King of Denmark; Count Scarabelli, Count Gozzadini and Doctor Mantegazza are Senators of the kingdom of Italy; M. Henri Martin, historian of France, Senator; Gabriel de Mortillet is a Deputy of France; Quatrefages is a member of the Institute; Cartailhac is a member of the Conseil Generale of Haute Garonne; Etle Massanat is mayor of his city; Eugene Fornier is a Supreme Judge at Rennes; Piette is Judge at Angers; Sir Lyon Playfair is a member of Parliament, and was speaker of the House; Sir John Lubbock is a member of Parliament from Oxford; Pitt-Rivers is a general (retired) in Her Majesty's service. These are all persons, who by their labors, either in the field or in the study, enjoy, and are entitled to enjoy, a high rank as anthropologists.

#### LECTURE COURSES ON PREHISTORIC ANTHROPOLOGY.

What commended itself much to me was the courses of lectures on the subject of anthropology which were given in many cities and towns in various countries in Europe. These courses are provided partly by state or by municipal aid, partly by the public spirit of the lecturers and other citizens, and partly by the anthropological societies themselves, under whose general direction, as I understand, they are delivered. The colleges and universities have not awakened to the importance of such instructions, but the societies seem to understand and appreciate both the necessity and importance, while they are alive to their own responsibility in the matter. Such or similar courses of lectures are provided and now in progress, as follows:

Italy—Rome, Anthropology Anatomie, by Sergi; Paleoethnology (or prehistorical anthropology) and Ethnology, by Pigorini. Florence, Anthropology General, by Mantegazza, assisted by Regalia. The former has just published his lectures of the past course in two volumes, on "Love Considered Anthro-

pologically and Ethnologically." Anthropology is also taught in lectures at Naples, by Nicolucci; Bologna, by Callori; Modena, by Riccardi; Turin, by Marselli; Perugia, by dal Pozzo de Hugo Mombello. At Munich, in Bavaria, Dr. Johannes Ranke has been chosen professor to fill the chair of anthropology, officially created in her university. In France courses are given at Lyons, by M. E. Chantre; at Toulouse, by M. E. Cartailhac, and at Narbonne. But by far the most extensive is that given at the School of Anthropology of Paris, in the hall of the society.

Possibly I could not make my idea and theirs plainer than to give the programmes of their courses of lectures. These programmes will speak for themselves and show the extent of the subject and the breadth and detail with which it is handled.

Programme of lectures in the School of Anthropology at Paris: 1880-1881, opening November 15, at 4 o'clock, Matthias Duval, Anthropology anatomic. Anthropology and embryology comparative—the origin of the embryo of the brain. Dr. Paul Topinard, anthropology biologic; anthropology of the living. Dr. Dally, ethnology—description of the races of men, their division, their origin, their filiation and their evolution. G. de Mortillet, anthropology prehistoric—origin of humanity, man of the tertiary period—of the quaternary. A. Honolaque, anthropology linguistic—origin and geographical divisions of language. Bordier, medical geography—medical geography and pathology—comparative of the human races—aptitudes and immunities pathologic hereditary—consanguinity—heredity—influence of race on the production, the spread and the division of maladies and infirmities. Bertillon, demography—to be held in summer.

The programme of last year was as follows: XI year, 1886-7; Dr. Paul Topinard, general anthropology: parallel of the characters of superiority and inferiority of the races of men. Dr. L. Manouvrier, ethnology: differentiation of the races of men in description and measurement of their bodies, ethnology artistic. M. G. de Mortillet, anthropology: prehistoric origin of the arts, agriculture and industry, (with lantern projections). M. A. Bordier, medical geography, comparative pathology. M. C. Letourneau, history of civilizations: evolution of marriage and the family. Dr. G. Herve, anthropology anatomic: comparative anatomy, the brain. There has just been established a complementary lecture by M. R. Blanchard: anthropology biologic, for every Wednesday. M. Matthias Duval holds his course during the summer on anthropology zoologic.

I might also give the subdivisions or heads of the lectures of M. de Mortillet, that of tertiary man, the origin of man: "A glance at the history of the theories of the origin of the earth and of man; geology, general notions; geologic revolutions and their

causes; continued movements of the surfaces; theory of earthquakes; laws of paleontology, succession of living (or created) beings; precursor of man, fossil monkeys; indications of the existence of an intelligent being during the tertiary period; Incised bones of a man from Mount Operto, Italy; depot of Thenay, (Loir and Cher), flints, burnt or retouched; depot of Puy-Cournay (Cantal), split flints, fauna; depot of Otta (Portugal), flints chipped, fauna and flora; human skull of Calaveras, California, skeletons of Brescia, Italy; jaw of Moulin-Quignon; subdivisions and climatology of the quaternary period; Neanderthal skull and race; skulls of Engis (Belgium), of Olmo (Italy), Laugerie-Basse and Cro Magnon (Dordogne); transformation and filiation of man; date (approximative) of the appearance of man; chronometers; glaciers, a proof of the antiquity of man."

The museum of natural history at the Jardin des Plantes in Paris maintains a tri-weekly course of lectures on anthropology delivered by the Nestor of the science, M. de Quatrefages. M. E. Hamy is collaborator. These gentlemen adopt a system not unusual in these courses, *i. e.*, to publish their lectures in book form after having fully digested them by two or more deliveries. They are now publishing in this way "A General History of the Human Race." M. de Mortillet published in this way his "L'Homme Préhistorique," Topinard his "Anthropologie Générale," Letourneau his "Sociology" and the "Évolution of Morality." Mantegazza published thus his "Amour," and others are now appearing in the same manner.

M. de Mortillet's course last year, 1886-7, was on the "Origin of the Arts, Agriculture and Industry." The details and subjects were as follows:

Heat, fire, lightning; *Beaux Arts*—engraving, sculpture, painting, music, architecture; medicine—surgery, sepulture and religion; arms—hatchets, *casse-têtes*, swords and poignards, bows and arrows, defensive arms; instruments—knives, scrapers, razors, saws, etc., etc.; hunting, fishing, navigation; agriculture, horticulture, domestication; dress and ornaments; metallurgy—gold and copper, bronze and tin, iron, silver and lead; ceramics—pottery, glass, enamel.

I need not pursue these details further. There exist anthropological societies, pure and simple, at Lyons, Toulouse and Bordeaux, while under other names of say Letters, Science, Art or Archæology, possibly given before anthropology was discovered, there exist in nearly, if not quite, every department in France and in many, if not most of the shires of England and the provinces of the other countries, societies which are actively engaged in the pursuit of prehistoric anthropology.

## INTERNATIONAL CONGRESSES OF PREHISTORIC ANTHROPOLOGY.

An important factor in European education in this science is the international congresses of prehistoric anthropology. It sprung from the meetings at Spezzia in 1865 and at Neuchatel in 1866 and became permanently organized at the session in Paris in 1867. Its subsequent meetings have been as follows: 1868, London and Norwich; 1869, Copenhagen; 1871, Bologna; 1872, Brussels; 1874, Stockholm; 1876, Budapest; 1878, Paris; 1880, Lisbon. The subsequent meetings arranged for Rome and Athens have been defeated by rumors of pestilence and war.

These meetings are well attended and bring together the most illustrious of the various nations. Their influence is beneficial. Not only do distant anthropologists become acquainted, but they have the chance to show and explain their new discoveries and air their theories. These congresses act as an international clearing house and enable the scientists to compare notes, correct errors, to test their compasses, if one may use a nautical illustration, and to be set each one upon his true course, to run until the next meeting. The proceedings are published in two volumes, comprising about 1,000 pages.

Permit me to describe some of the anthropological societies:

## ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.

It has 493 members. Its annual fee for membership is two guineas. Its receipts 1886 were, viz:

From subscriptions.....	£543 17 00
From publications.....	83 12 10
Dividends on stock.....	30 9 00
	<hr/>
	£657 18 10

## Its expenses:

Rent.....	£165 00 00
Printing four numbers of Journal.....	242 18 00
Lithography.....	30 00 00
Salaries, etc.....	164 7 8
Postages.....	33 17 11½
Office expenses.....	23 5 9½
Houses expenses.....	33 00 00
	<hr/>
	£693 19 5

But it had on a balance of £178.17.11 at the beginning of the year which was reduced to £119.18-3 at the close. It has invested in stock 3½ per cent, the sum of £900. It publishes its journal now in its 16th vol. in four numbers, yearly averaging 450 to 500 pages per volume. The character of the work done by the members may be seen from the following summary of lists of subjects on which papers have been read.

1884.

Papers relating to the science of anthropology generally, or particularly to Great Britain and Ireland.....	5
Those relating to the science in foreign countries.....	30
	<hr/>
Total.....	35

1885.

The science generally, or else particularly to Great Britain and Ireland.....	7
Those to foreign countries.....	21
Total.....	28

1886.

The science generally, or to Great Britain and Ireland.....	6
To foreign countries.....	38
Total.....	44

It has its assembly room, library offices, etc., in the second floor of No. 3, Hanover Square, renting from the Zoological Society, for which it pays £165 per year.

The Societ  d' Anthropologie of Paris possesses some particular advantages—it pays no rent and it has a subvention from the government of 1,000 francs. It has 632 members, of which but 7 are honorary. Its annual dues are 30 francs. Its receipts for 1885 were 19,205 francs against expenses of 17,927 francs, which last include the printing of the Bulletins. It has invested in *rentes d'  tat* the sum of 43,593 francs, and enough on hand and deposited to make its capital up to 54,304 francs. It published its bulletins quarterly, which make an annual volume averaging 800 pages, which are furnished gratis to members; and Memoires also quarterly, making an annual volume of 500 to 600 pages, for the price of 16 francs. It has its assembly room, library, laboratory, museum in the fourth floor of the Ecole de la Medicine at No. 15 in the street of the same name. I can not say how many thousand skulls and skeletons it has in its museum, but it is the entire collection, gathered by him during his life and donated at his death by the greater master of modern anthropology, Paul Broca. The competition among sculptors for making his bust, ordered by the society, has just closed. It is to stand in the grand hall. It has since been completed and inaugurated. The Societe d'Anthropologie appropriates annually 1,000 francs called the prize Broca and 500 for the prize Godard for the most valuable essay upon anthropology. A new prize Bertillon has lately been established by the testament of the donor of that name. He bequeathed 5,000 francs.

#### THE MEDICAL PROFESSION IN EUROPEAN ANTHROPOLOGY.

I have already mentioned the greater interest existing among the common people in Europe, concerning the science of prehistoric anthropology, than I have seen in the United States. Perhaps I am mistaken in this; I hope I am. My sole intention in this statement has been to increase the public interest in the United States, so that no such difference can be remarked by future travelers. I notice, however, a remarkable difference in the two continents among the doctors who are interested in this new science. The Societe d'Anthropologie at Paris numbers among

its 318 titular members residing in Paris, no less than 150 doctors—members of the medical profession, while of the 141 members who reside in France but out of Paris, no less than 69 are of the medical profession, making 219 titular doctors out of a total of 459 members residing in France or 48 per cent.

I do not cite the statistics of American societies, because I do not desire to make any comparison even seemingly invidious, beside it would be useless, for any one at all interested in this statement would not be content with my figures but would examine for himself—thus he would accomplish my purpose better than I could do it myself.

I have used the medical profession, because it has such intimate relations with—so near akin to—anthropology—especially with prehistoric anthropology. The anatomy of the human species is alike at the foundation of both sciences. No one can become eminent in either without a knowledge of human anatomy. It and anthropometry and craniometry are but the tools of the anthropologist which are called into use with each dolmen he uncovers and each mound he opens.

Prehistoric anthropology is cousin german to the medical profession. I appeal to you if the American profession has not somewhat neglected its relative.

THOMAS WILSON.

Washington, D. C.

8

Plat. 4. 2.

## THE PYRAMID IN AMERICA.

The pyramid as a religious symbol, is the subject of this paper. We are first to inquire about the origin, growth and early use of the pyramid, and ascertain by this means, if possible, how the pyramid came to be a symbol. We shall, however, consider the pyramid as it is found in America, rather than Oriental countries, for we have here the earliest forms and the successive stages, and the primitive uses, and reasoning from analogy, we judge, that these will give us the real explanation. We go on the supposition that America is the home of the pyramid, at least one of the homes, and that here we have a history of its growth and development.

I. Our first point is as to the prevalence of the pyramid in America. It is well known that there are many pyramidal structures on the continent; they may not be perfect pyramids like those of Egypt, nor are many of them as massive as those upon the banks of the Nile, yet they are very interesting and numerous, and are worthy of study.

1. Let us consider the different classes of the pyramids on the continent. The pyramids of America differ from those in Asia and Egypt, in that they embrace a series of structures which are more or less in the pyramidal form, but which vary in size and shape, and are scattered over all parts of the continent. Under this head may be mentioned the rude and primitive mounds which are scattered through the Gulf States, but which have the pyramidal form. This would constitute the first class. Similar to these, but differing in geographical location and in size, are the massive pyramids of Mexico, many of which such as Cholula and Xochicalco, were natural eminences on which artificial structures were erected. This constitutes a second class. Next to these the terraced pyramids of Mexico and of Central America. These are wholly artificial; and were, for the most part, erected for religious purposes, and yet there is little difference between them and the palaces found in the same region. This constitutes the third class. Under the fourth class we should embrace those structures which are found associated with palaces, but which were pyramidal in form and were undoubtedly used for the sacred purposes of worship. This would leave for the fifth class the few perfect pyramids, such as are found at Teotihuacan in Mexico, and at certain places in Peru. It will be seen from this that the pyramids of America are quite numerous,



and that they form a very important feature in the prehistoric architecture of the country.

We give a series of cuts to illustrate these points: First, a view of the pyramidal mounds in Yazoo Pass, Miss., Fig. 1; second, a view of the pyramid of Cholula, Mexico, Fig. 2; third, the terraced palace called "the Governor's House," at Uxmal, Fig. 3; fourth, the pyramid and palace at Palenque, Fig. 4; fifth, the pyramid at Teotihuacan, Fig. 5. These represent the different

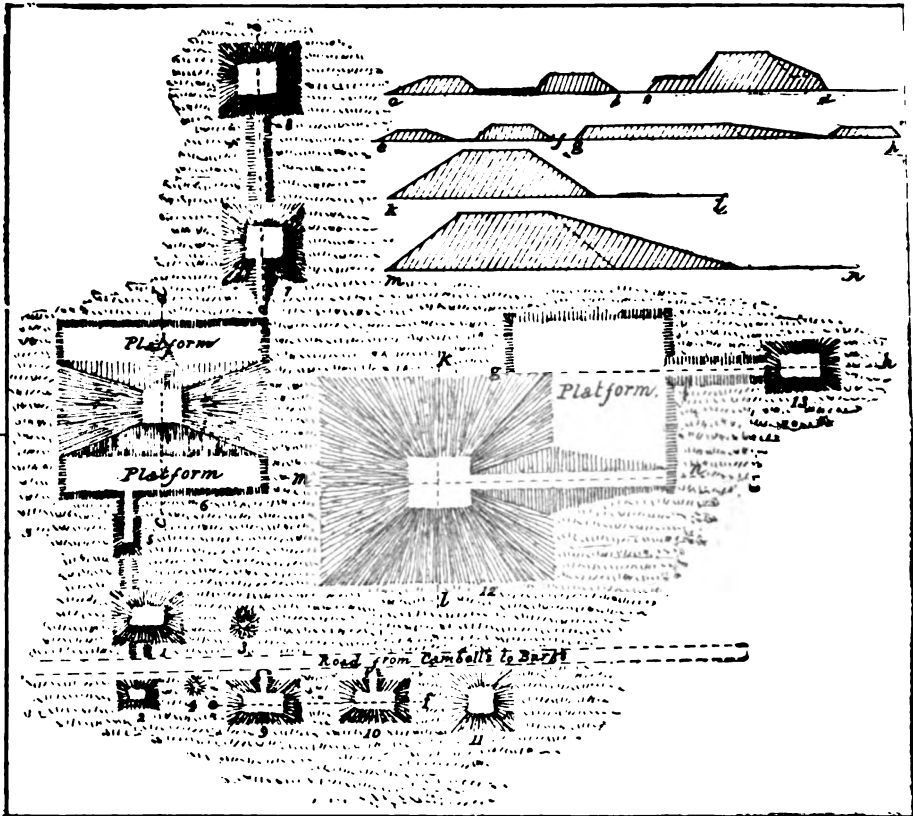
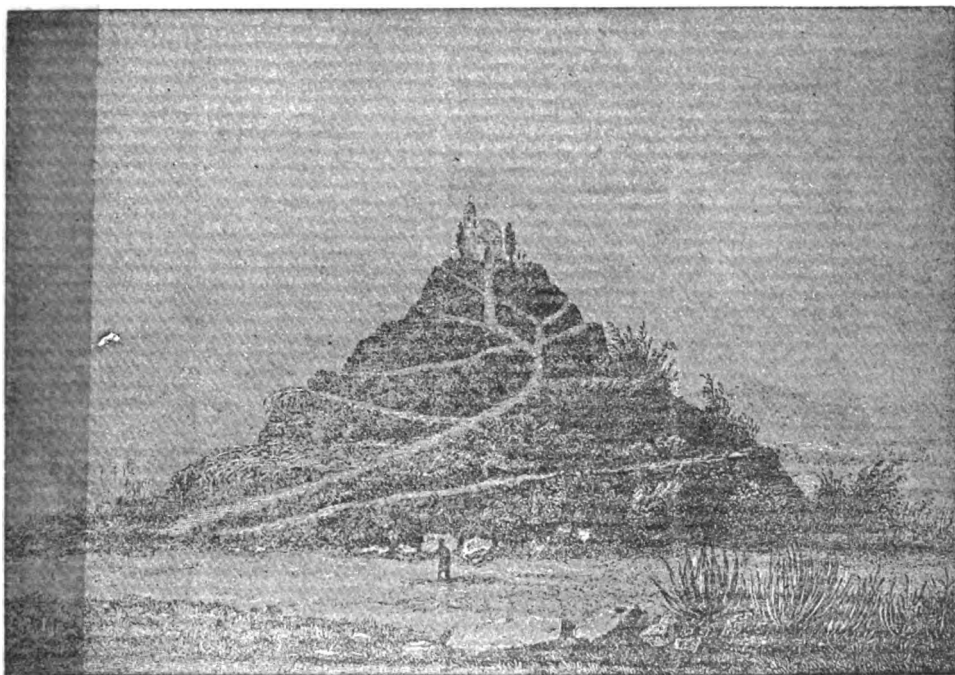


Fig. 1—Pyramidal Mounds in Mississippi.

classes of pyramids in America. We call attention to the variety of types in these figures.

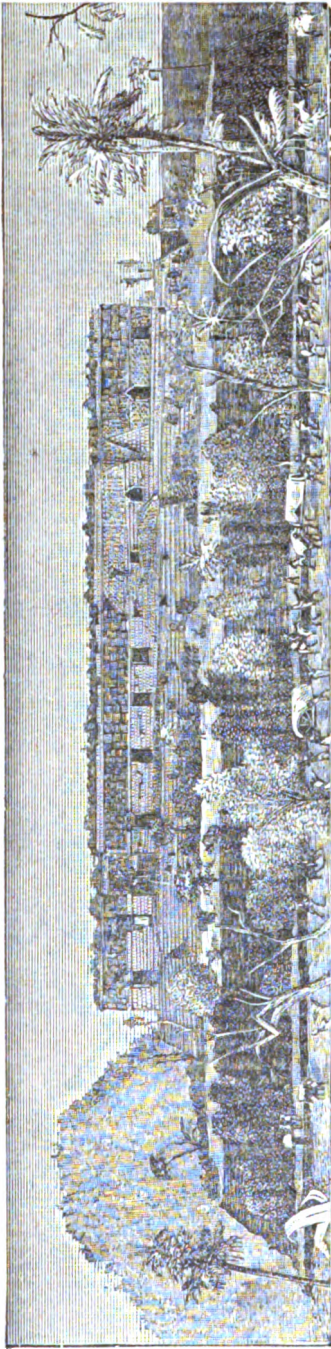
It is singular what types of structure rule in the building of pyramids in America. In Egypt every pyramid seemed to have been built after the same pattern. In America every pyramid was erected after its own pattern; scarcely two being found anywhere upon the continent which were alike, and few which resemble those of Egypt. Resemblances have been drawn between the terraced pyramids of America and those of Assyria,

and some have supposed that we have an Assyrian instead of an Egyptian type; but the so-called terraced pyramids in America constitute only one class, and others differ so much from this class that we cannot say that the Assyrian type rules. A resemblance has been traced between the stone structures of Mexico and the pyramidal mounds of the Mississippi Valley, and some have undertaken to trace an American type of pyramid. This seems more plausible than either of the preceding conjectures; and yet the pyramids of Mexico differ so much from one another, and the mounds also differ, that it is difficult to trace any one type in them.



*Fig. 2—Pyramid of Cholula.*

2. The size of the pyramid is to be considered. A comparison has been drawn between the pyramids of America and of Egypt. It has been said that the pyramid of Cahokia and of Cholula are fully equal to those of Ghizeh and of Mycerinus. We must, however, distinguish between the horizontal extension of a natural or artificial heap of earth, and the elaborate layers of stone, and grant to the Egyptians the more elaborate structures. Cahokia covers twelve acres; but was only ninety feet high, and it is uncertain whether it was natural or artificial. Cholula is larger at the base than any one of the Old World



*Fig. 3—Governor's House at Uxmal.*

pyramids, over twice as large as that of Cheops, but only slightly higher than that of Mycerinus. Many visitors have believed that the pyramid is only partly artificial, the "brick work" having been added to a smaller natural hill. Humboldt says: "The construction of the teocalli recalls the oldest monuments which the history of our civilization reaches. The temple Jupiter Belus, the pyramids of Meidoum, and Dag-hour, and several of the group of Sakkahra were also immense heaps of bricks, the remains of which have been preserved during a period of 30 centuries down to our day." A distinction must be, however, drawn between the ruins of artificial structures and the immense earth-heaps; and the imagination is to be restrained in its efforts to draw the comparison. There is no pyramid in America which ever reached the height of the Egyptian, and no palace which was ever as elaborate as those in Assyria.

3. The geographical distribution. It has already been noticed that the pyramids of America are scattered over a large part of the continent. They seem, however, to be confined to certain belts of latitude. In a general way their location resembles that of the pyramids in the Eastern hemisphere. The pyramid seems to be a structure peculiar to the warm climate. It is probable that they were all devoted to sun-worship, and this will account for their having

been confined to the torrid regions, sun-worship being the religion which prevails in those regions.

In order to understand the number and sizes of the pyramids of America the reader is requested to examine the appended table, which gives the various structures, with their location and character and dimensions:

COUNTRY AND PLACE.	CLASS OF STRUCTURE.	PART OF STRUCTURE.	Diam'ts.	Height...
<b>GUATEMALA.</b>				
Zakuleu .....	Pyramid.	Base.	102 feet sq.	28 feet
Cavinal.....	Palace.	Two stories.		40 feet
Yacha.....	Pyramid.	Five stories.	66 feet sq.	45 feet
Tikal.....	Pyramid.	Two stories.	72x24 ft. q.	86 feet
Utatlan.....	Palace.	Three terraces.	1100x2200	120 feet
Utatlan.....	Fortress.	First terrace.		
Utatlan.....	Altar.	Base.	66 feet sq.	33 feet
<b>HONDURAS.</b>				
*Copan.....	Temple or place.		624x809 ft.	70 feet
<b>YUCATAN.</b>				
*Uxmal.....	Governor's House.	Second terrace.	545 feet sq.	20 feet
Uxmal.....	Governor's House.	Third terrace.	100x300	40 feet
Uxmal.....	Governor's House.	Tower.		50 feet
Uxmal.....	Governor's House.	Pyramid E.	200x300	65 feet
<b>CHIAPAS.</b>				
Palenque.....	Palace I.	First terrace.	280x310	40 feet
Palenque.....	Palace I.	Summit.	180x228	30 feet
Palenque.....	Palace I.	Tower G.	80 feet sq.	50 feet
Palenque.....	Palace I.	Corridor.	20x150 long.	20 feet
Palenque.....	Temple of 3 Tablets.	Base.	110 feet.	
Palenque.....	Temple of 3 Tablets.	Shrine.	25x76	35 feet
Palenque.....	Temple of the Cross.	Base.	134 feet.	
Palenque.....	Temple of the Cross.	Shrine.	50x30	40 feet
Palenque.....	Temple of the Cross.	Roof.	3x35	15 feet
Palenque.....	Palace C.	First terrace.	350 feet sq.	19 feet
Palenque.....	Pyramid F.	Second terrace.	258x214	28 feet
Palenque.....	Pyramid D.	Third terrace.	200x120	50 feet
Palenque.....	Temple of the Sun.	Base.	155x235	88 feet
Ocoelingo.....	Five Terraces.	Shrine.	28x30	
<b>OAJACA.</b>				
Tehuacan'pec	Pyramid.	Base.	55x120	50 feet
Tehuacan'pec	Altar.	Base.	12x12	3 feet
Mitla.....	Palace.	Base.	120x120	
Mitla.....	Palace.	Court.	80x190	18 feet
Mitla.....	Palace.	Buildings.	120x265	
<b>YUCATAN.</b>				
Zayl.....	Palace.	First terrace.	60x220	
Zayl.....	Palace.	Second terrace.	18x150	
Zayl.....	Palace.	Third terrace.	112x160	32 feet
Chichen'itza..	Nunnery.		140x202	
Kabach.....	Palace.	Base.		
<b>VERA CRUZ.</b>				
Papantla.....	Seven-storied Pyramid		90 feet	54 feet
Misantla.....	Pyramid.		33 feet	17 feet
Tusapan.....	Pyramid and Shrine.	Base.	30 feet	
<b>MEXICO.</b>				
Cholula.....	Pyramid.	Base.	1440 feet sq.	200 feet
Xochicalco.....	Natural Hill.	Base.	2 miles.	
Xochicalco.....	Natural Hill.	Summit.	285x328	400 feet
Xochicalco.....	Natural Hill.	Pyramid.	55x50	16 feet
Teotih'acan.....	House of the Moon.	Base.	420x511	
Teotih'acan.....	House of the Moon.	Summit.	38x60	
Teotih'acan.....	House of the Sun.		733 feet sq.	203 feet
Teotih'acan.....	House of the Sun.	Citadel.	1248x1388	83 feet
Teotih'acan.....	House of the Sun.	Circle of Mounds.	600 feet	

\*See Fig. 8.

†See Fig. 3.

‡See Frontispiece,

§See Fig. 4.

||See Fig. 13.

II. We are next to consider the question how came the pyramid to be in America. There are three theories in reference to this, namely: 1st. The autochthonous theory. 2d. The theory of a transmitted cultus. 3rd. That of a common traditionary origin.

We are to consider these theories in their order:

1. In favor of the first theory, we give the opinions of various authors. Mr. H. H. Bancroft has written considerably concerning the origin of sun worship on the continent of America. The following may be said to be an epitome of his views:\*

The forces which minister to the requirements of man's physical nature may be said also to aid his intellectual progress. These forces are the configurations of the surface, the peculiarities of soil, stimulus furnished by climate, and the character and supply of food. If color and race are dependent upon climate, why might not the tinge of thought and the peculiarities of religion also. There are zoological zones in which the elephant, the hippopotamus, the rhinoceros, the lion and the tiger abound. There are other zones in which the wolf, the fox, the bear, and other hardy creatures are numerous. The character of the animals seems to partake of the nature of the surroundings. It is so with man, his habits, disposition, character, seem to be affected by climate and surroundings, and so was his religion. Sun worship prevailed in Egypt, in Babylonia, and on the banks of the Ganges, even when the civilization of those regions had reached its height. The religions of the people inhabiting these lands were naturally sensuous. Sun worship was a sensuous system. It always appeared among a self-indulgent and luxurious people, and was always attended with sensuous rites. It differed from animal worship in this respect. Some would regard it as the result of a sedentary life, and as attendant upon agricultural pursuits, but it was more owing to the subtle influence of the climate and the physical surroundings, than the employment. Agriculture might lead to a sense of dependence upon the great luminary, and so the thoughts would be directed to it as to a divinity. The blazing heat of the sun would suggest to the inhabitants of the torrid regions many traits of a personal character, and the different phases of the sun would be interpreted as the varied moods of a divinity. There was a combination of the nature powers in the torrid regions which made them seem like divinities to the people. Storm and sunshine, clouds and darkness, night and day, lightning and thunder, rain and wind, were all divinities. Some of them symbolized war and death, others symbolized wine and self-indulgence. There was a strange mingling of personal gods and the powers of nature in all these regions."

It was so among the Greeks, as well as among the

---

\*See Bancroft, *Native Races*, Vol. III, page 292.

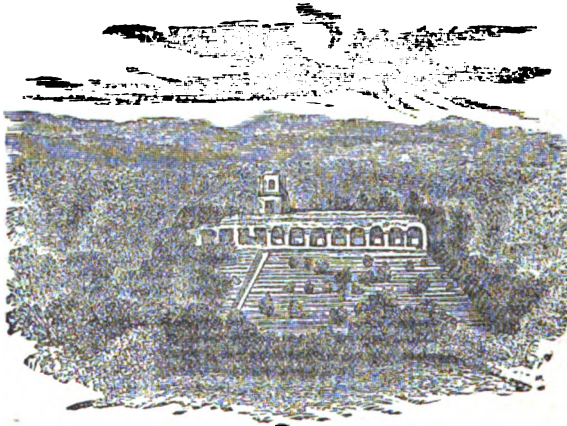
Hindoos. The religions of these well-known people are supposed to be the result of climate and of physical surroundings. They can all be traced back to an original nature worship. Nature powers were personified and at last were worshiped as personal beings, the material form having dropped out from the popular conception. Dionysius, the god of wine, Venus, the goddess of lust, Apollo, the god of manly beauty, Mercury, the god of letters, Mars, the god of war, were originally planets which attended the great sun divinity. Zeus himself was the son of the sun. His father, Saturn, was a sun-god, the father of all the gods. We might go on. Such are the views which have become very fashionable. According to these views, the architectural structures of this country, such as the animal mounds, the earth circles, pyramidal mounds, terraced pyramids, and the sun temples, were all the result of a natural development.

The theory of the autochthonous origin of the pyramid has many advocates. Still, there are several difficulties in the case. (1). We are not sure that the conical mounds grew into the pyramidal earthworks or that the pyramidal earthworks have anything to do with the stone pyramids of Mexico, or that the stone pyramids of Mexico and Central America had their development on the American soil, as they are widely scattered, and no one race can be said to have built them. (2). The traditions which have prevailed among the different tribes and races, among which these various structures are found, point to a diverse origin, for each of them, and come in as a conflicting and rebutting evidence; at least there are cross lines which must be reconciled before the theory is complete. The northern tribes migrated from the northwest and erected their tumuli and remained in their savage condition, and never developed beyond the rude animal worship. The tribes in the Gulf States also migrated from the west, but found the pyramids in the region and only adopted them as suitable to their modes of worship. The civilized tribes of Mexico also migrated from the north, but they found a culture which preceded them and so the whole subject is wrapped in a mystery and it is only conjecture when we say that one stage developed out of the other and one structure gave rise to another, for the people were diverse and their origin seemed to have been also diverse.

2. The second theory is to be considered. It is that the pyramid was introduced into America. Religion might be transported as well as developed. Of course there would be a transformation as it was transported. It would naturally come to be accommodated to its surroundings. In this way we may account for the pyramid, the circle, the serpent, and other symbols in America. Mythologists acknowledge that there was a traditionary religion in Asia and other countries of the east. And much of the symbolism in those countries is owing to

tradition. The two lines are to be recognized. The traditional faith and the natural development of thought. This is illustrated in the case of the pyramid. This is supposed by some to have sprung up on Egyptian soil as a structure devoted to sun worship; by others to have been a mere adaptation of a structure to the purpose. It was originally an imitation of the traditional mountain from which the first ancestors migrated, and this mountain was the type after which the pyramid was built. This we may see in the mythology of the Greeks.

The theory of a transmitted symbolism is one which cannot be altogether rejected, for it has too many things in its favor for that. It is noticeable that this theory which the celebrated Max Müller advocates, though his views have more regard to the languages, myths than to symbolism, and more to the Indo-European race than to any of the Allophyllian tribes or peoples.



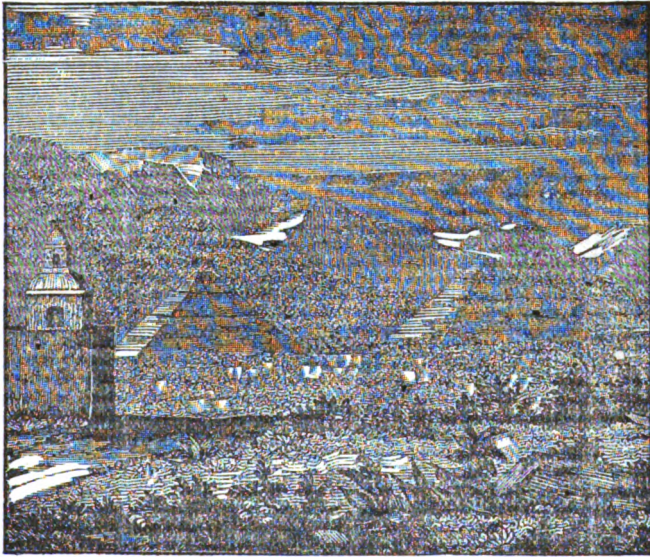
*Fig. 4—Pyramid at Palenque.*

3. The third theory is, however, the one which just now is the most interesting, and the most novel. It is that the pyramid was patterned after a tradition, the tradition of the mountains of the North. This brings us to the main point. Dr. Warren has spoken of the mountain which was the pivot of the world, and would make the pyramid to be in imitation of the mountain of the north. According to this theory the pyramid of Egypt would be the pivot of the earth, a theory which Dr. J. H. Seiss has carried out to an alarming extent. According to this theory the symbolism of the east and the west, especially that which embraced traditions and astronomical signs, was derived from the early tradition of the mountain of the north. The following may be regarded as a summary of these views:

The Greeks had no pyramids, and we rarely recognize even the circular tower, and yet there was a latent symbolism in the



Greek mythology, which reminds us of the traditional mountains. Zeus had his abode upon Mt. Olympus, and Juno was his consort. The temples to Saturn and to Jupiter were mere shrines. They did not admit the worshipers but were only the abode of the divinity, the same as the shrines upon the summit of the pyramids of Chaldea. They were also placed upon high rocks to typify the mountain. This conception of the mountain being the primitive place of worship, the abode of the gods, and the center of creation was common among all the Asiatic races. The Mount of Meru or Harmoezd was the pillar of the sky and the navel of the earth. It was situated in Thibet, the primitive home of the human race. Olympus, Parnassus, Ida, were reproductions of it. This same world



*Fig. 5.—Pyramid of Teotihuacan.*

mountain was, however, known to the Egyptians. The famous oracle of Jupiter-Ammon was at Meroe, which possibly was named after Mt. Meroe or Meru. The Hindoos maintain that Mt. Meru is the navel of the earth. The Chinese terrestrial paradise was at the center of the earth—the palace of the center. Dr. Wm. F. Warren maintains that the ancient Mexicans conceived the cradle of the human race to be situated in the farthest north, upon the highest mountains surrounded by clouds, the residence of Tlaloc, the god of rain. We recognize in these traditions the prevalence of a primitive nature worship, as well as to the original abode of the human race. The question arises whether the pyramid was the outgrowth of this primitive tradition and the result of a transmitted faith. Dr. Warren



says, "the stupendous terraced pyramid of Cholulu was a copy and symbol of the sacred paradise mountain of Aztec tradition, which was described as standing in the center of the middle country. The national temple of Tlaloc stood in the center of the city of Mexico, whence four causeway roads conducted east, west, north and south. In the center of the temple was a richly ornamented pillar of peculiar sanctity."\*

The center and capitol of Peru was Cuzco, (bl., "navel,") whence to the borders of the kingdoms branched off four great highways, north, south, east and west, each traversing one of the four provinces into which Peru was divided. Dr. Warren quotes Gerald Massey who holds that the Mound-builders had retained this tradition, "Some of the large mounds left in Mississippi were called navels by the Chickasaws, although the Indians are said not to have had any idea whether these were natural mounds or artificial structures. They thought Mississippi was at 'the center of the earth' and the mounds were as the navel in the middle of the human body."

Dr. W. F. Warren has written a book which, to some, will account for the pyramid in America exactly as it accounts for the pyramid in Assyria and in Egypt, and prove that there was a common source for the pyramid in both countries. Some might object to this and say that the theory in the book was based upon mere conjecture, and that there is no more plausibility to this than the first theory. We are, however, inclined to accept the facts as brought out by this book and to say that the tradition of the "mountain of the north," the "holy mountain," the "primitive abode of the gods," the "starting place of the human race," is to be discovered on this continent as well as in the historic regions of the east. Dr. Warren has referred to the tradition among the Choctaws, that at the time of the creation, a superior being came down from above and alighting near the center of the Choctaw town, threw up a large mound or hill called the "sloping hill." Then he caused the red people to come out of it, and when he supposed a sufficient number had come out he stamped on the ground with his foot. When this signal of his power was given, some were partly formed, others were just raising their heads above the mud, emerging into life and struggling for life. We have no doubt that many other traditions and customs might be ascribed to the same source. Of course the theory of the local origin of these myths will be offset to this one of the common origin, and yet we have the fact before us and are to keep our minds open to the suggestions whether overthrowing a theory of our own or not.

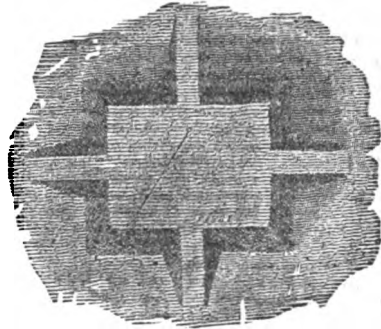
III. Our third inquiry is as to the development of the pyramid on the American continent. 1. There are writers who maintain

---

\*"Paradise Found," by Dr. W. F. Warren. Boston: Houghton & Mifflin.

that the mounds or tumuli found in the Mississippi valley, are the primordial forms of the pyramid, and that there is an unbroken succession of structures on the American continent, from which the pyramid was developed. The theory is, that this succession of pyramidal works furnishes to us a view of the various stages through which the pyramids in Egypt and Assyria passed before they reached their perfection. This is a very plausible theory and one that needs to be considered. It makes the prehistoric works of America, all the more interesting if we are to regard them as the forerunners of such remarkable historic works as the pyramids were. If it was the same continent that produced this series, we should certainly conclude that we had learned the history of the pyramid. But, as the prehistoric series has disappeared from Asiatic countries, we are glad to recognize this succession of steps on the American continent even if we have to span a wide gulf to make the early historic and the prehistoric to connect. There are types here which seem to have anticipated the more advanced pyramids

elsewhere, and we might imagine that these were the types from which the historic pyramids grew. There are also various structure which seem to furnish different stages of the growth of the pyramid, and it is very easy for us to make out a plausible and interesting theory and imagine that we have a perfect picture of what the pyramids in the East were before the historic structures were erected. We might con-



*Fig. 6.—Truncated Mound from the Ohio Valley.*

jecture many things and say that there was a gradual development from the one to the other. These different earthworks found in the Mississippi valley, show the stages through which the Mexican pyramid passed on its way to completion. We might imagine that the large conical mounds and so-called haystack mounds form connecting links between the tumuli and the truncated pyramids, and that the terraced platform houses of the Pueblos formed the connecting links between the inhabited earthworks of the Mississippi Valley and the lofty teocalli found near the City of Mexico, and conclude that we had proven a succession of structures and a sure line of growth or development. These three links or steps in the order of progress which are found in the burial mounds, pyramidal earthworks, and the sacred teocalli would to some prove that the pyramid had its origin and growth on this continent. We might refer to the correlation of these different structures, to the state of society and to the different modes of worship, and

say that the tumuli were built by a savage people and devoted to the rude primitive animal worship. And that the truncated pyramids were erected by an agricultural people, and devoted to sun worship, and that the teocalli belonged to a civilized people and were devoted to the highest form of nature worship possible. This view has a great deal of plausibility about it, and yet great caution is needed in reference to it.

2. We illustrate these points by a series of figures. First, by an ordinary truncated mound from the Ohio valley. Fig. 6. Second, by the view of the mound at Cahokia. Fig. 7. Third, by the cluster of platforms and pyramids which are found at Copan in Central America. Fig. 8.

It will be noticed that there is a complete series here, and that there are some remarkable resemblances between these structures and those of Oriental countries, especially in the grouping of the mounds near together, and in the arrangement of the terraces along with the pyramids. It will be noticed that these structures are scattered and situated in different



*Fig. 7—Mound at Cahokia.*

parts of the continent, but this only illustrates how numerous pyramids are on the continent. The subject is suggestive, and we might dwell upon the analogies and resemblances, but we use the figures only to illustrate the point.

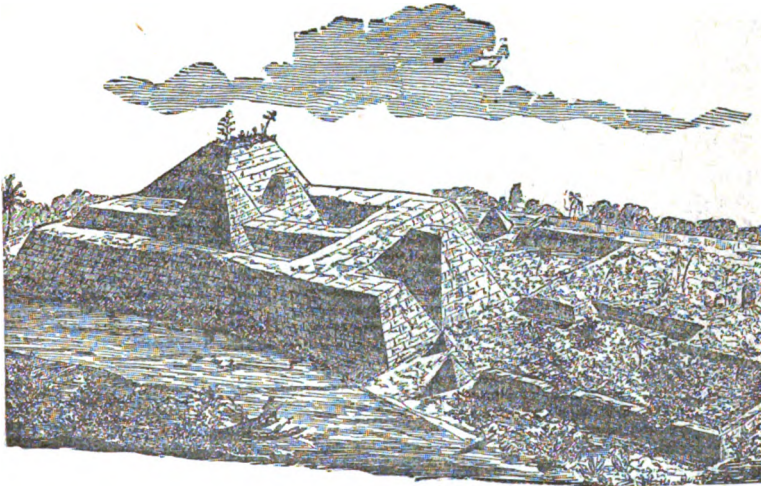
It will be noticed that there are great resemblances between the American pyramids.

These resemblances are found, first, in the location of the pyramids among a sedentary people, the Mound-builders and the Mexicans both being partially civilized; second, the shape of the structures are very similar. They are platforms on which, formerly, temporary structures were erected. If they were temples, they were temples which were inhabited; third, the probable use of these structures. The pyramidal mounds of the Mississippi Valley and the platform pyramids of Central America, were undoubtedly devoted to the form of worship. There were shrines on all these pyramids which were dedicated to the sun. The resemblances between all the pyramids in America are very strik-

ing. This constitutes the strongest argument for an autochthonous origin.

3. We are to consider what may be safe ground as to the development of the pyramid in America. The following are suggestive points:

(1.) The primordial forms of the pyramid may be discovered here, the mounds generally being regarded as the germ of the pyramid. (2.) The successive stages through which the pyramid passed, are exhibited in the different kinds of mounds. (3.) The typical pyramid with its terraces and shrines is found in Mexico and Central America. (4.) The use of the pyramid as a sacred structure and as a symbol of nature worship is learned here. The perfect pyramid is not discovered, and yet the earlier forms are very common.

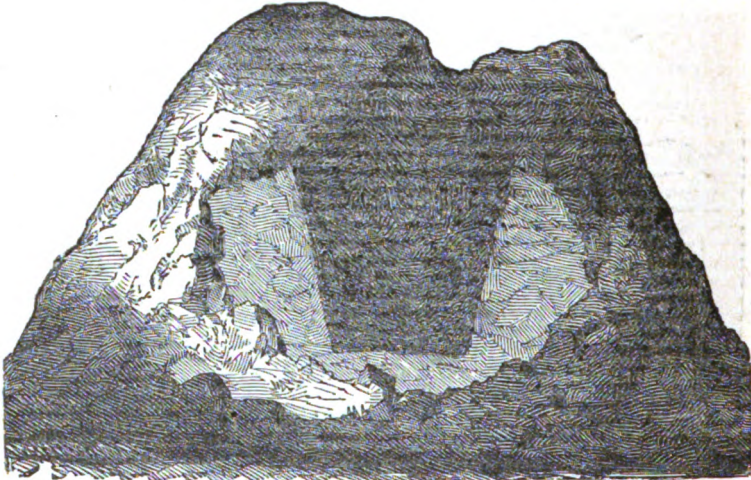


*Fig. 8.—Platforms and Pyramids at Copan.*

The Mound-builder's pyramid certainly shows uniformity. The Aztec pyramid may also be recognized in Mexico. The Maya architecture may also be recognized in the pyramids of Yucatan. The Peruvian style of architecture may also be recognized in the pyramids of Peru. It is possible that we shall yet trace a common type in all the pyramids; but that is as far as we may go. The race quality, or the ethnic quality may be recognized in the type of the pyramids. Some have undertaken to show a connection between mounds and Mexican structures. Others have undertaken to trace a resemblance between Aztec and Toltec, and between the Nahua and the Maya; but this is a difficult task. The variety of types baffle every investigation of the kind. Prof. Short says: "Maya architecture furnishes evidences of growth, and may be classified into the Chiapan or ancient, and the Yucatan or modern styles. It is a question,

however, whether the distinction between the ancient and the modern type of pyramid can be clearly established." The Chiapan or ancient style is exhibited in the imposing remains of Palenque; but the pyramids of Uxmal differ materially from those at Palenque, and we have so diverse types in the same region, that we are at a loss to determine which is the earlier and which later.

IV. This brings us to the question of the object of the pyramid and the law of the parallel development. The parallel lines are very manifest. It is in accord with the general law of progress. The architecture of the east seems to have developed in about the same order that it did in the west. If we take any of the departments of architecture, its earliest use and form, its ordinary ornamentation, the religious symbolism, which embodied itself in it and the technic arts which found their scope there, we shall find a parallel in each.



*Fig. 9.—Mound at St. Louis.*

1. For instance, the idea of utility. Ferguson says: "The wigwam grew into a hut, the hut into a house, the house into palace, the palace into a temple, by well defined and easily traced graduations." And yet he says "those styles which are admired through all time are in the original, the products of ethnical taste." According to this theory we might say that burial was the purpose for which the pyramid was erected, and that the law of utility as well as of ethnical taste, would account for it. Utility and worship were combined in many of these prehistoric pyramids. We can hardly account for the earthworks, or for the platforms of the pyramids, unless they were used for habitation as well as for purposes of worship. It is probable that they were the foundations for the houses of the chiefs, and that the worship of the people was led by the chief

or by the priest who belongs to his household. It has been known that many of the large pyramidal mounds were used as burial places; this would show that utility and worship were combined. The great mound at St. Louis contained a burial chamber 75 feet long, 12 feet wide, 8 feet high, and several bodies were contained in it, which were covered with beads, and other paraphernalia of royalty. We give a cut to illustrate this: Fig. 9. The pyramid of Cahokia is another specimen which proves that utility and worship were combined. It will be seen that there were platforms and terraces in this pyramid, and it arose in successive stages to a very considerable height. The size of this earthwork shows that it was used for habitation. It covers nearly twelve acres, and was six hundred feet in diameter at the base, but only about 90 feet high. It is possible that it was built for a refuge in high water, or it may have been like the other structures in the South, designed as a platform on which the caciques might build their houses. The terraces, however, show a diverse use and it is very probable that on the summit there were fires kept lighted as sacred to the sun. This structure reminds us of the sacred mountains of the North, and has striking analogies to the pyramids of Mexico, as well as to those in Assyria. There were three uses to this earthwork. It was a burial place and abode for the people and a massive temple to the sun, and illustrates the point. See Fig. 7.

2. The law of ethnic development is an important point and illustrates the case. There are several elements which constitute the basis for architectural progress, or the source of architectural growth. The advance of art and architecture was as follows: First, the hemispherical mounds; second, the pyramidal platforms; third, the terraced pyramids; fourth, the massive and finished pyramids, with its simple and silent shape impressing one with an air of mystery. Subsequent to this, the mechanical principles came in. The arch, the pier and lintel, and other parts of the building. But for the purposes of worship, the simple pyramid seems to have been the most effective, and the effect may have been owing to the proportions. It seems strange that these pyramids in America should have assumed proportions which are so true to nature and so expressive of grandeur. The towers at Mugheir and Birs, Nimroud in Assyria, are not more correct in their proportions than are these. The pyramids of Cheops and Mycolenus and others upon the Nile are, to be sure, higher than are any of the pyramidal mounds of America. And yet the universal testimony of travelers is, that these mounds are very impressive. Such is the case with the great mound at Cahokia, and it is true, to a certain extent, even of the conical mounds. Their size, their proportions and their situation combining to produce a very singular impression upon the mind.



This is one of the most remarkable features of the prehistoric works of this country. They were designed as religious structures, and the sense of awe and fear existed in the minds of the builders to a wonderful extent. (3.) The impressibility of the human mind is another point. Architectural grandeur is often found in primitive structures, giving the impression that this sense was strong in the primitive mind. The pyramids of Egypt, the topes of the Buddhists, the mounds of the Etruscans, depend almost wholly for their effect upon their dimensions. This is the case in America: pyramids were made massive to impress the minds of the people. There are, to be sure, a few places where high art and elaborate ornamentation were made to gratify the sense of beauty and the more delicate emotions, but mass was mainly depended upon. The mounds are often impressive on account of their size. They are placed upon high hills and by this means they are made impressive. Their outlines when thrown against the sky give an impression of grandeur, which is irresistible. At times the gateways to the sacred enclosures are erected in the pyramidal shape, and have a massiveness about them which give the same impression. The simplicity of these structures add to the impressiveness. It may seem strange that the mounds and earthworks of the Mississippi Valley should be compared to the pyramids of Egypt; and yet we are convinced that many of the elements of grandeur were embodied in both classes of structures. We may say the same impression was made upon a rude people by these massive earthworks that were made upon a more cultivated people by the more finished stone structures. Simplicity and grandeur, solidity and the sense of the sublime were combined in them all. The propylæ before the temples at Carnac, in Egypt, are scarcely more impressive than are the rude massive walls which form the gateway to the sacred enclosure at Newark.

The pyramids of Cheops are scarcely more impressive, notwithstanding their size, than are the massive pyramidal mounds which lift their heads above the high bluffs which overlook the valley and the city of Vincennes. The pyramidal mound at Cahokia gives the same impression, although this was erected upon the level plain and not upon an eminence. The sense of grandeur is exhibited by many of the pre-historic works of America. The pyramid form seems to have favored this. The pyramid of Cholulu in Mexico, the great teocalli at Uxmal, were impressive works of architecture; their very simplicity and massiveness, giving a sense of stability, and it may be that type of structure was adopted as much for its effect as for any other reason. The solid works were first given to sun worship.

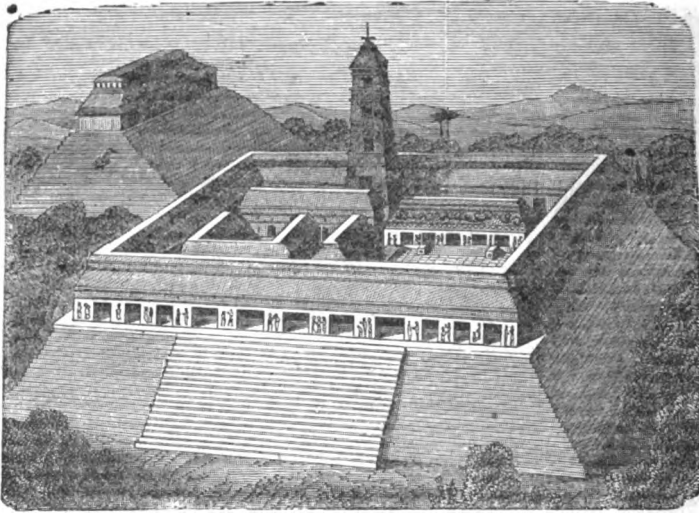
We find there striking analogies between the pyramids in the west and the east. The three uses to which the pyramidal

mounds were subject are very suggestive. In the first place the fact that they were burial places reminds us of the pyramids of Egypt. The earliest kings of Egypt utilized the pyramid for this purpose, and it is said that the "mastaba" or square built tomb found in Egypt was the structure which there anticipated the pyramid. Second, the fact that the terraces and summits of these pyramidal mounds were used as the places from which the morning salutation was given to the rising sun is suggestive of the use of the terraced pyramid in Assyria. The terraces there were devoted to the different planets and on the summit of the pyramid in Mexico, there was a shrine. Three of the pyramidal mounds were inhabited and so were the elevated platforms of Assyria and Babylonia. This analogy between the structures of the east and the west is most remarkable. The question arises, however, whether these pyramidal mounds were symbolic structures. They were devoted to sun worship and may have been symbols. It has been conjectured that they were oriented, as the pyramids of Egypt were, yet this is doubtful. They were sometimes surrounded by circular walls and enclosures, giving the idea that the sun symbol was intended. The terraces with which the pyramids abound have been explained in the same way. There are certain pyramidal mounds which have very high conical tumuli on the summit, as if the purpose was to light fires upon them which should be sacred to the sun. The fact that they were used by the natives, subsequent to the discovery of America, for the purpose of sun worship, is another proof. The fact also, that they were in the territory of the agricultural races and that they belonged to the stage or grade of civilization in which sun worship prevailed. We should say then that the rudimentary and primitive forms of worship were exhibited here and that we have in the pyramid a prehistoric structure which was anticipated of the historic pyramid. Primitive Sabeanism prevailed here as well as among the Chaldeans, so that we may examine the structures in America and ascertain what that system was in prehistoric times elsewhere.

V. This brings us to the subject of the pyramid as a religious structure. Were we to study the pyramids of Mexico and of Central America and ascertain their religious significance we might learn from these how the pyramids of the east, came to be used as they were. One perhaps will throw light upon the other. There is no doubt that the pyramid was primarily devoted to sun worship. This was one of the uses to which the pyramids in America were subjected; it was the chief use to which the stone pyramids were consecrated. The historical and traditional records show this. There may be exaggerations in some of these accounts, and yet it is evident that the pyramids were devoted to sun worship and that many bloody sacrifices were offered. The tocalli reeked with human gore. The



victims were taken to the summits, were prostrated upon the sacrificial stone, their bodies laid open by the priests, their hearts torn out, while still quivering, and thrown into the face of the sun, while the forms were hurled down the steps of the pyramid to the bottom. It was a bloody and cruel scene. Long lines of victims were said to stand waiting to be sacrificed. There is no doubt that long processions marched around the terraces and approached the shrine on the summit. It was a cruel divinity which they worshipped—the sun divinity—notwithstanding the beneficence which was ascribed to him. The sacrificial stones, both covered with symbols of sun worship, but in the midst of the symbols was the channel which would carry off the flood from the face of the sun. The symbol was covered with the blood of human victims and this was called washing the face of the sun. The pyramid in Mexico was de-

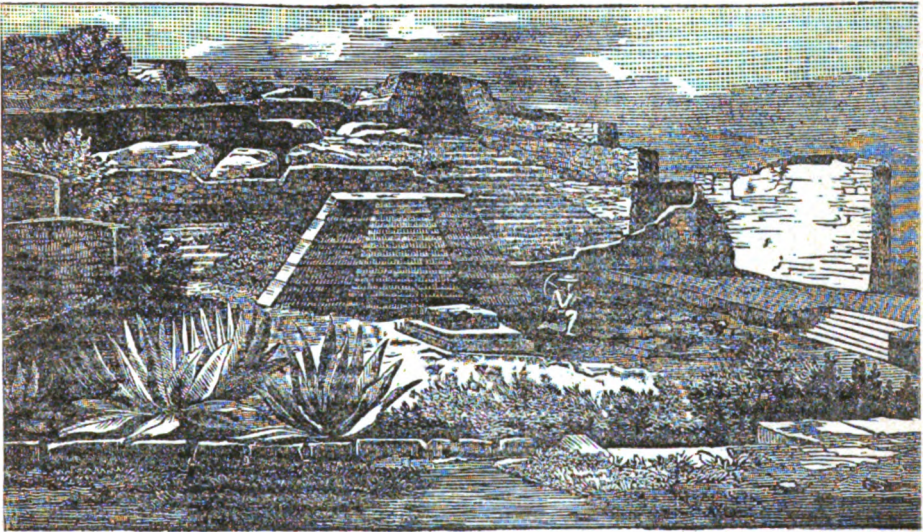


*Fig. 10.—Palace and Pyramid at Palenque.\**

voted to the most cruel practices. We do not learn that human sacrifices were offered on the pyramids of the east, and yet we are not sure but that they may have been practiced in prehistoric times. The instrument of sacrifice, the stone knife, is seen depicted among the hieroglyphs of Egypt and a few are supposed to have survived the earliest times. The sacrifices by Abraham of his son Isaac on the mountain would indicate that the practice had prevailed in that region.

\* Bancroft says: "The basis of the foundation structures are usually rectangular, the largest dimensions being 1500 feet square, as at Zoyl; while many have sides of from 300 to 300 feet. Most of them have two or more terrace platforms, from 20 to 50 feet high. Most of them have stairways, some of them 100 feet wide. All the pyramids are truncated, none forming points at the top. The edifices are usually built on a summit platform: one building on a summit, but in some of them enclosing a courtyard. The buildings are long, low and narrow, the greatest height 31 feet, greatest width 39 feet, greatest length 322 feet."

The association of the pyramids with temples, shrines and palaces is to be considered in this connection. In some of the localities, as at Copan, the structures are crowded together in close proximity and a strange combination of pyramids, platforms, temples and shrines is apparent. See Fig. 8. It would seem from this that worship was as much an object as habitation. If fires were lighted upon the summit of the pyramids, then the number of them surrounding one massive platform would be exceedingly impressive. It was a strange superstition which should crowd the temples and the palaces so near together and then cover them all with a glare of sacrificial fires. The stairways were steep, the platforms elevated, the shrines were some of them in the



*Fig. 11—The Pyramid of Quemada.\**

most mysterious shapes, while obelisks and idol pillars stood about the foot of the stair-cases. Everything that could make the place impressive and cover it with the air of mystery, was devised. In Mexico the stair-cases were guarded by immense serpents' heads, the bodies of which formed the balustrades or rails to the stair-cases. The shrines on the summit were some of them in the shape of serpents' mouths held wide open, and

\* Bancroft says of this pyramid: "Here we have a square enclosure; its sides 150 feet, bounded by a terrace 3 feet high, 12 feet wide. Back of the terrace, on three sides, stand walls 20 feet high. The north side of the square is bounded by the steep sides of a central cliff. In the centre of this enclosure is a trincated pyramid with a base of 38x35 feet, 19 feet high, divided into several stories. In front of the pyramid, and nearly in the centre of the square, stands a kind of altar, 7 feet square and 5 feet high. A very clear idea of this square is given in the following cut and presents an interior view. The pyramid, the central altar, the eastern terrace with its steps, standing walls, and the natural cliff, are all clearly portrayed:

the fires that were burning within made them fearful to look upon, showing that cruelty was the spirit which prevailed here. In Yucatan the worship was more peaceful, but the architecture was more elaborate. Our supposition is that the pyramids were temples sacred to sun-worship and were symbolic structures.

We give a cut of the so-called palace and pyramid at Palenque, and the pyramid accompanying it to show that there may have been a combination of palaces and of temples (Fig. 10) in the same structure or in close proximity. There is no doubt that one of these buildings was a palace and occupied by the cacique of the village or city, but that the temple was in close proximity to it on the pyramid, which is in the background. The view of Charnay is "that these ancient cities were occupied by a people among whom the ranks and grades of society were very distinct, and that the buildings in ruins are the remains of palaces and temples. The huts of the common people have perished." This is in opposition to the theory advanced by Mr. L. H. Morgan that they were the communistic houses, and that the common people dwelt in these as well as the chiefs. The illustration, we think, refutes the theory. Mr. H. H. Bancroft has undertaken to restore one of these palaces and its accompanying pyramid and shrine—the one at Palenque. Whether the restoration is correct or not we conclude that the explanation is a good one. Fig. 10.

Still there are those who deny this and who would make the pyramid a place of habitation or a fortress. Mr. Ad. F. Bandler, has made a study of this pyramid of Cholula. He calls it a fortified pueblo, and says: "If we imagine the plateaus and aprons around it, covered with houses, possibly of large size, like those at Uxmal and Palenque, or on a scale intermediate between them and the Pecos communal dwellings, and many other places in New Mexico, we have then, on the mound of Cholula, as it then was, room for a large aboriginal population." This, however, reduces the sacred structures of Mexico and Yucatan to a very common-place condition, and would do away with the religious sentiment which was so powerful. The historical annals of the aborigines prove that the chief object of this pyramid was to support a temple. At the time of the conquest there was a stairway which led up the slope to the temple. The Spaniards under Hernando de Cortez had a fierce hand to hand conflict on the slopes and notwithstanding the desperate resistance of the natives, they burned the magnificent structure on the top.

The number and variety of the pyramids would prove that they were all used for religious purpose. Writers have speculated as to who were the builders of the pyramids in Mexico, Yucatan and Honduras, and have endeavored to trace a resemblance between the Nahua and the Maya religions. There is

no doubt that the two were very similar, and that the same cult which prevailed in Mexico during the time of the Conquest, prevailed in Uxmal and Palenque in prehistoric times. The study of the ruins in all of these localities, reveals a remarkable resemblance in the structures. There are pyramids at Tusapan, Papantla, at Misantla, at Centla, in Vera Cruz, which formerly had shrines upon the summit and which were ascended by wide flights of steps. They show that the pyramidal type was the structure which was devoted to worship. The ruins of Oajaca, of Mitla, and the pyramid at Tehuantepec show the same thing. Mitla was a palace, and yet there are pyramids here. The pyramid of Tehuantepec was erected with stair-cases on the four sides and plastered, hemispherical walls forming the corners. A highly ornamented platform and shrines on the summit.

VI. We are to consider the analogies which exist between the symbolism of the two continents, especially that which is found in the pyramidal structures. These analogies have never that we are aware of, been traced out, and yet they are many and interesting. We shall first take up the pyramids of Egypt and their uses and see what structures in America resembled them; next, consider the terraced pyramids of Assyria and Chaldea, and lastly speak of the traditional views which have embodied themselves in many structures both in the Oriental continent and the American continent. (1.) Let us consider the pyramids of Egypt. In Egypt the pyramids are so-called perfect pyramids, that is, their sides are smooth inclined planes, the steps having been filled in and the whole veneered. No such pyramids are found in America, though there are occasionally structures whose face seemed to have been built up smoothly and covered with plaster. In one respect the pyramids of Egypt resemble the pyramids of America, especially the pyramidal mounds. They were devoted to burial purposes. There are sixty-six pyramids in Egypt. The oldest is supposed to be that of Senefru, of the fourth dynasty. It was prior to that of Cheops. The latest are supposed to be those of the twelfth dynasty, those of Lake Meros. All of these were sepulchers. It is a question which antedated the other, the Assyrian or the Egyptian. Lenormant says that "temples in the form of pyramids (that is, pyramidal or terraced temples) must be considered quite a recent institution in Chaldea, as compared with what they were in the country of Shinar or Sumar, where national tradition, like that in the Bible, placed the construction of the first of them side by side with the confusion of tongues." No one dared to attribute the foundation of the original pyramids of Babylon and Borsippa to any historical king; for they were said to be the work of a "very ancient king," or perhaps even more correctly of "the most ancient king" or "first king." This is an interesting inquiry. In America burial mounds probably preceded

pyramidal earth-works, at least in the order of succession, if not in date. The question is whether the pyramid as a burial place antedated that which was used as a temple devoted to sun-worship. It is maintained by some that the tope and the tumulus gave rise to the pyramid, and that the platform temples were a later invention. Others, however, maintain that the pyramids were originally devoted to sun worship, and that their use as a burial place was later. That it originated in the ambition of the kings to perpetuate their names and the religious idea about the necessity of the preservation of the body. It is possible, however, that the two grew on parallel lines, the terraced pyramids of Assyria on one, and the perfect pyramid of Egypt on the other. The earliest known structure in Egypt was a quadrangular building, in the shape of a truncated pyramid, called the "mastaba." It was used as a tomb. It reminds us of the truncated pyramid or pyramidal earthworks of the Mississippi Valley. Many mastabas are from 30 to 40 feet in height, 150 feet in length, and 80 feet in width, and are veneered with hewn stone. The mastabas are arranged in regular streets in Ghizeh, and in this respect they resemble the pyramids of the Gulf States, which were often arranged in rows and around a square. See Fig. 2.

The pyramidal mounds were used as burial places; this is the case of the great mound at St. Louis, also with that at Etowah, Ga., and is supposed to be the case with that at Cahokia. There is another analogy between the mastabas and the burial mounds. A superstition prevailed that the mummy or the statue was a double of the soul. The corpse received visits from the soul, which from time to time quitted the celestial regions.\*

A narrow aperture was left to the "serdab" in the center of the mastaba. A similar superstition prevailed among the Mound-builders. There was a double to the soul, and frequently the skull was trephined so that the soul might go in and out, and claim the body for its own. The same superstition is supposed to have prevailed in prehistoric times in Europe. The "dolmens," which were the abodes of the dead, had holes in the stone at the door, which were supposed to be for the passage of the soul in and out of its abode.

There is another parallel found in the offerings made to the friends. In Egypt each mastaba was composed of a receptacle for the dead and a chapel for the living. The chapel was the reception room of the "double," for the idea was that a double belonged to the dead, a soul and body. The relations, friends, and priests celebrate funerary sacrifices at the commencement of the seasons. They placed offerings at the exact spot leading to the entrance to the chamber, or eternal home of the dead. Provision was made for a perpetual observance of the feast. Painted

---

\*See Maspero's *Egyptian Archaeology*, page 110.

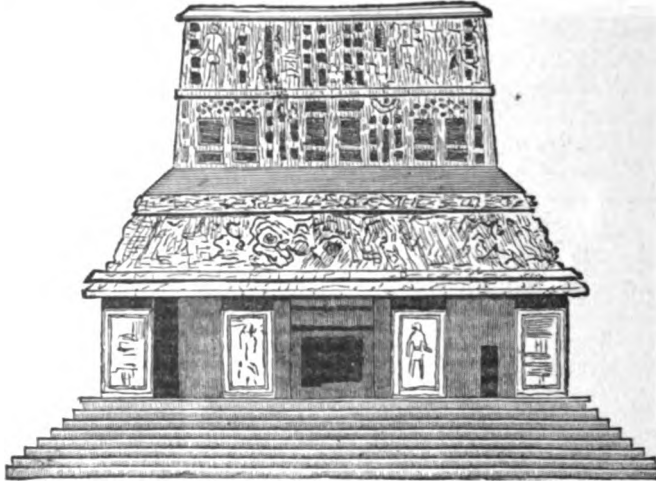
or sculptured reproductions of persons and things were placed upon the walls of the chapel, so that in years to come the "double" might see himself depicted upon the walls in the act of eating and drinking, and so he ate and drank. Here then we have the animistic conception, the same superstition which prevailed among the Chinese, when paper money and paper pictures were burned before the tombs of the dead, and among the North American Indians, who always presented food before the graves, that the spirit of the dead might partake of it. The Ojibwas of Lake Superior, to this day, build houses over graves. They place carved pieces of wood at the gabled ends of these houses to signify the totems. They leave the sides and ends of the house open, the roof being supported by corner posts, but on the floor they place the provisions which are offered to the spirits of the dead. The house is open so that the spirits can gain access to it. They believe in the double as much as did ever the Egyptians. (2). In Egypt the people had no right to direct intercourse with the deities. They needed a mediator who, partaking of both human and divine nature, was qualified to communicate with both. The king alone, the son of the sun, was of sufficient high descent to contemplate the god in his temple. The sacrifices could be offered only by him, and even the offerings of the dead were supposed to have passed through his hands. The family availed themselves of his name to forward them to the other world. This idea, however, never obtained in America. The king was in Mexico regarded as superior and was favored with divine honors; but there was no such mediatorial work.

There were idols in Mexico and Central America, but they contain symbols of nature worship, for the human face and forms are supposed to represent nature powers. Here we have striking analogies between the East and the West. These idols or stone pillars were really obelisks, resembling the obelisks of Egypt in their use and symbolic significance, and differing only in being carved and covered with symbolic figures. It is probable that they originated in ancestor worship very much as the pillars of the northwest coast, but they also became devoted to sun worship and were covered with the symbols of both systems. The analogy between them and the obelisks of Egypt would be carried out, if we can imagine the carved stone figures, such as the statue of Memnon and other portrait idols of the kings wrought into the obelisks, and so presenting portraits of the kings as well as monuments or pillars to the sun. We have already spoken of obelisks being everywhere associated with sun worship. There are obelisks as well as portrait columns. These analogies are very remarkable, and this brings us to an important question.

These parallels between the burial mounds of the Mississipi

Valley and the mastabas of Egypt are very suggestive, and they show how the pyramid as a burial place may have originated. Still there is just as much of a parallel between the pyramidal structures of America and the terraced temples of Assyria, for both were devoted to sun worship. The analogy in fact becomes more complete when we come to this class of structures.

2. Let us take up the Assyrian pyramids and those structures which were devoted to sun-worship. There is no one who doubts the prevalence of sun-worship on the two continents or the devotion of the pyramid to that cult. In Assyria and Babylonia the pyramid was consecrated to the sun, moon and stars, the number of the terraces being either three, after "the triad of gods of the three worlds," or five, after the five planets, or seven, as at Borsippa, after the sun and moon and the five planets. The terraces were, as at Ecbeaana, of dif-



*Fig. 12.—Temple of the Cross.*

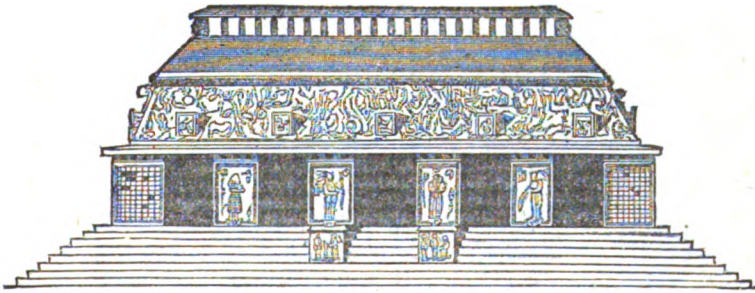
ferent colors, according to the sacred colors of the plants, the upper gold, the second silver, next red, blue, yellow, white, the lowest black, according to the hues ascribed to the sun, moon, Mercury, Jupiter, Mars, Venus and Saturn. The pyramids in Mexico and Central America were terraced pyramids devoted to sun-worship. There was a shrine on the summit, and in the shrine a sacrificial stone, and on this stone human victims were offered to the sun. There were also sacred colors in Mexico, though those colors were not represented on the pyramids.

There are many places where this analogy can be traced. We give cuts to illustrate this. We refer first to the temples at Palenque; one of them called the "temple of the cross," (Fig. 12) the other the "temple of the three tablets," (Fig. 13) names given them from the tablets which were discovered inside the temple. These shrines were standing on pyramids, but were near build-



ings which have been called palaces. The temple of the cross was on a pyramid which measures 134 feet on the slope. The temple was 58 feet long, 31 feet wide and 40 feet high. The superstructure upon this temple was a frame or open lattice of stone blocks 15 feet high, which was supposed to have been added because of its imposing appearance. The temple of the tablets was also upon a pyramid, measuring 110 feet on the slope. The shrine is 75 feet long, 25 feet wide, 35 feet high. Each of the four central piers on this front has bas-reliefs in stucco representing single human figures, and each bearing in its arms an infant. We might dwell here upon the symbolism found in these shrines and the idols at the base of the pyramids, but must defer that to another time. Our study is with the pyramids themselves.

We would, however, call attention to the resemblance between these terraced pyramids and those of Assyria and Chaldea. These were built on high platforms, they were associated with palaces, they were the most prominent building in the ancient cities. They were consecrated to the sun, idols were formed on



*Fig. 13—Temple of the Three Tablets.*

them which were symbolic of native persons and of sun worship. They were situated in the midst of an idolatrous people and in torrid regions, where the sun has its greatest power. They were continued for many centuries, notwithstanding the progress that was made by the people. History makes a record of the important part which these terraced pyramids form in the religious services of the people and their close connection with the government. Some of the most powerful influences which have ever effected the destiny of the people have emanated from these. The system of chronology and astrology, and in fact nearly all the solstitial and sacrificial symbolisms of both continents have been connected more or less with these, and we may say that no structures and no specimens of art furnish more or closer analogies than do these. In whatever way these analogies come, we must acknowledge them to be great.

3. Our final conclusion is that the pyramid in America was a symbol as well as in Asia and Africa. It was both a burial place and a shrine, but in all cases was devoted to the sun.



✠

## IS MONOTHEISM A "PRIMITIVE" FAITH?

In the May number of THE ANTIQUARIAN is an article on Nature Worship.\* The author, after giving a page or so of quotations, mostly from James Freeman Clark's work,† makes the following assertion: "The evidence I have presented shows conclusively that the first form of religion common to men was Monotheism, or faith and the worship of one God, \* \* \* \* Polytheism has grown up around, or been engrafted upon, this earlier faith as the result of religious speculation." Now this is a pretty important point to be decided in this off-hand manner. A great many scholars are anxiously studying this question, and many volumes and essays appear every year on the same, and the question is yet open. Probably this will always be the case. THE ANTIQUARIAN being given to the discussion of a different class of subjects, I do not wish to intrude on its pages with a long drawn reply. But permit me to question the conclusion so confidently set forth.

First, in regard to some of the lower races. The quotation from Waitz‡ is not correct. Waitz does not assert that we "call them Monotheistic," but says that "if we cannot assert they are monotheistic, we dare say they stand on the boundary of Monotheism," which, we submit, is a distinction *with* a difference. Neither has Müller shown that "fetish worship or nature worship is not so old as the worship of one god." In his essay, "Is Fetishism a Primitive Form of Religion", his conclusion is: "We are justified, therefore, I think, in surrendering the theory that fetishism has or must have been the beginning of all religions."§ But this conclusion is accepted by the majority of writers on this point, who are not at all willing to conclude therefrom that Monotheism was the primal faith.|| Before the savage can ascribe supernatural powers to a stone, he must, of course, form some idea of supernatural power; but it by no means follows that this is "Monotheism."

Although the author quotes from Clarke that, "we find the Monotheistic idea among some of those who are placed by ethnologists on the lowest planes of human development, such as the Hottentots and Bushmen of South Africa, the Negroes of the

---

\*Nature Worship in Ancient and Prehistoric Religions, by William Tucker.

†Ten Great Religions, Vol. II., P. 148 ff.

‡Anthropologie der Natur Völker, Band II., §167.

§The Origin and Growth of Religion, P. 123.

||Tyler, "Primitive Culture." Spencer, "Principles of Sociology."

Gold Coast, the natives of Australia, the islanders of Polynesia, the inhabitants of Terra del Fuego, the Indians of the Amazon River, the North American Indians, the Esquimaux, and the natives of the Andaman Islands in the Bay of Bengal"; he should have continued the quotation a few lines further, where we learn that this "idea" is held along with the belief in the world of disembodied spirits generally. And any one who cares to read up on this subject will quickly learn that among the lower races it is indeed *only* an "idea." Along with the luxuriant growth of savage philosophy generally, the belief in fetishism, magic, witchcraft, in short Animism fully developed, there is, in fact, an "idea" that one fetish is of greater power than the others. As the quotation stands it leaves the impression that Monotheism is quite clearly embraced by these people. The author's great authority, Clarke, however, draws from the beliefs of these people only the conclusion that they have *come up* to this idea.

In regard to the other people cited by him, we might enter a general demurrer. Suppose we admit the statements, the conclusion does not follow; simply because not one of the people cited can be called "primitive" and their belief is no evidence of primitive belief. The Mayas and Aztecs were semi-civilized, and even if they did possess an "idea" of Monotheism what proof is it of their primitive belief? The case is still more glaring with the other people. The Egyptians with their architectural science, their well developed government, their organized priesthood, their hieroglyphic writing, can not be quoted as an instance of *primitive* belief. In regard to the Vedas, supposing we admit the statement made, what follows? Why simply that in that very advanced state of society reached by the Asiatic Aryans in the Vedic age, when civilization had dawned for them, when society was well advanced, when they were so old in fact that their language had already become decrepid and lost the bloom of youth—here and there the idea found expression that there was but one power, or force. Some of their bards embalmed this idea in verse, but what evidence is this of their primitive belief, or for that matter the belief of the people in general? Equally valueless are the references to the religion of Assyria and Babylonia.

But we need not confine ourselves to a simple demurrer. It is not by any means admitted by all scholars that the beliefs of these various advanced people were monotheistic.\* Where the author quotes from Clarke and Max Müller as to the beliefs of the Aryans, he should have added the fact that Müller calls this stage of belief, not Monotheism, but *Henotheism*, (which term is also accepted by Clarke,) which may be defined as ascribing

---

\*Consult, for instance, Tiele: "Egyptian Religion;" "Lang;" "Myth, Ritual and Religion;" "Barth;" "Religions of India;" etc., etc.

supreme power to the particular god of whom the bard might be singing, which, again, is a distinction *with* a difference.

Now, there are Monotheisms and Monotheisms, and it would be well to have some definition of Monotheism to start with. Several of the Semitic nations, most advanced in civilization, adopted a qualified Monotheism. Believing in a multiplicity of gods, they had adopted *one* as their national god, and with national vanity, in each case, considered their god the supreme one. Such was Asshur among the Assyrians, Chemosh among the Moabites, and Jahveh among the Israelites. But this belief did not deny the existence and power of the other national gods. This statement ought to give offense to no one. We do not refer to the ideas of the inspired prophets of Israel, but to the common impressions of the masses of the people. Hear how Jeptlah answers the children of Ammon: "Wilt not thou possess that which Chemosh thy god giveth thee to possess? So whomsoever Jahveh our god hath dispossessed from before us, them will we possess." (Judges x 24; R. V.) The Moabite stone shows clearly that the Moabites regarded Chemosh exactly as the Israelites did Jahveh. War is declared in accordance with his command; "Chemosh said to me: go take Nebo against Israel." If successful, victory is ascribed to Chemosh; "Chemosh drove him out before me," the king exclaims. Exactly similar expressions are used by the Assyrians in regard to Asshur. The king, on his expeditions, is "in the service of Asshur." Victory is ascribed to him, some such expression as this is sure to occur: "Exceeding fear of Asshur, My Lord, overwhelmed them." One king after another complacently excuses his deeds of cruelty, since they were done by command of Asshur, and for his honor and glory.

This was by no means the worship of the god under different names. There was no acknowledgment of the universality of the power of their supreme gods. When Shalmanser carried away the inhabitants of Samaria he replaced them by colonists from Assyria. They had sickness and other troubles in their new home. What did these "Monotheistic" worshippers of Asshur do? Call more earnestly on him? No, they sent in hot haste to Shalmaneser to send them some of the Israelitic priests to teach them the "manner of the god of the land." (II Kings: xvii, 24, ff.) In fact, ancient monotheism was tribal and territorial. It is surely an elastic definition of "Monotheism" which points triumphantly to the beliefs of such people to show that Monotheism was a primal faith.

But we are in danger of making this article too long, and enter on a discussion unsuited for these pages. We simply wanted to deny the conclusion presented. For ourselves, we believe that religious culture is no exception to culture in general. Man has struggled up to these higher conceptions, has

had to feel his way to Monotheism from the depths of savage philosophy. In this question, no great moral truth is at stake. The belief in an overruling Providence, the immortality of the soul, and the necessity of a life of purity, or of the inspiration of the Bible is in no way concerned. E. A. ALLEN.

CINCINNATI, OHIO.

---

## Correspondence.

---

### NEW YORK EARTHWORKS.

*Editor American Antiquarian:*

In an article in the January number of THE ANTIQUARIAN it is said, "The earthworks in Michigan, Ohio and New York state resemble one another very much. They consist of rings with the ditch upon the outside, sometimes upon the inside, probably the remains of old stockades." On this point Mr. Squier said in his *Aboriginal Monuments of New York*, "It has all along been represented that some of the enclosures were of regular outlines, true circles and ellipses, and accurate squares—features which would imply a common origin with the vast system of ancient earthworks of the Mississippi Valley. Submitted to the test of actual survey, I have found that the works which were esteemed entirely regular are the very reverse, and that the builders, instead of constructing them upon geometrical principles, regulated their forms entirely by the nature of the ground upon which they were built." A glance at the plans which he gives strengthens his statement, though some from other sources are somewhat incorrect. In the main, however, he is right. The circle, ellipse and square, actually such, rarely appear. If we speak of ring forts in New York, therefore, it is usually only in a general sense. They are almost always affected by the situation. Several earthworks in Onondaga and Oswego counties, N. Y., have been reported as circles, and the only one of these remaining is very regular, and I have always called it a circle. The nature of the ground there, and on the other neighboring sites, was favorable to this form. These, however, are exceptional cases, and the New York earthworks should be classed as irregular in outline.

Mr. Squier spoke of the earthwork near Fort Plain, in the Mohawk Valley, as not only the farthest east known, but as the only one on waters flowing into the Hudson river. I have lately

learned of the existence of some in the vicinity of the old Portage at Rome, N. Y. They occur both on Wood creek and on the Mohawk river, but I have not examined them or obtained descriptions, though a friend has sent me the exact location of some. I hope soon to have detailed accounts.

W. M. BEAUCHAMP.



## PALEOLITHICS IN PENNSYLVANIA.

*Editor American Antiquarian:*

Although I have, since the publication of my article in Vol. I, page 10, of THE ANTIQUARIAN, found new stations from which have been obtained paleolithic implements, I have remained silent regarding these discoveries. These relics are fac-similes in form and material of those found in the river drift of the Delaware. Of this I was told by Prof. F. W. Putnam, the curator of the Peabody Museum of Archæology at Cambridge, Mass., in a letter in answer to a few sent him. A number forwarded to the Smithsonian Institution by the writer, caused its director to make special mention of them in his report for 1887, page 38, to the regents of that institution. It gives me pleasure to know that my article has at last received that recognition which should have been given it years ago.

Did the finds at Reading indicate as great an antiquity as some writers propose for the drift finds in the Delaware valley? They are, alas! but surface finds. Every one of them found associated with remains of the Indian, far away from where glaciers ever ventured, or ice rafts could have dropped them.

I would not have it understood that I believe they were made by the Indians. I have long inclined to the belief that they are the remains of human beings low in the grade of civilization, a people of few wants, whose few implements served numerous purposes, and who were displaced by the Indians upon their arrival here.

That these unknown people wandered further south is attested by the finds of W. J. Hoffman, M. D., of the Bureau of Ethnology, Washington, D. C.; also, on the banks of the Potomac river at Uniontown, near that city. (See American Naturalist for 1879, p. 113.) These were also found with the more modern Indian remains.

The inquiries of Mr. Thomas Wilson, of the Smithsonian Institution, establish the fact that they are pretty well scattered from ocean to ocean.

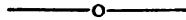
While searching for relics of the Indians in a ploughed field

on the banks of Maiden Creek at Virginsville, a small village 16 miles northeast of Reading, Pa., I found one of these objects—material, quartzite. Two were found by the writer, in the same condition on the banks of the Lehigh river, a short distance east of Catasauqua, Pa.

I have taken from the surface of Jeter's island, in the Lehigh river at Allentown, Pa., six or eight of these rude objects. For the past four years I have, when on the island, made most careful search but found none. They appear to be rare in the valley of the Lehigh. The island just mentioned is of river drift formation, as is the station at Catasauqua, and I infer from the position in which I found the implements that they were washed on the island during high water. In both instances just mentioned have they been found associated with Indian remains. A few of these objects are now in the possession of Prof. Henry W. Haynes, of Boston, Mass. With one exception they are also of the same material as the Reading finds. The exception is made of yellow jasper and resembles closely the European river drift relics. Jasper of many colors is found in the south mountains lying three miles south of Allentown, and this elevation is supposed to belong to the Lamentian period. The writer has made careful examination of the railroad cuts running through the drift formed by the Lehigh river along its banks, but so far success has not crowned his efforts. Future research will perhaps bring objects of this kind to light.

A. F. BERLIN.

ALLENTOWN, Pa., June 1, 1888.



## HAFTED PALEOLITHICS.

*Editor American Antiquarian:*

On page 307, Vol. 7, No. 5, of THE ANTIQUARIAN, you made the statement that the Australian relic may have its counterpart in North America, but you have not seen any. I send you drawings of three in my collection which show the notch for hafting very plainly. These were found, as all have been, at the bottom of gulleys where the rain and melting snows of spring wash out the bluffs in this vicinity. They are not plenty, probably a dozen or fifteen have been found. The notch is indicated on almost all, better defined in some than in others. They are extremely rude, the material of most being, I think, quartzite. I call them paleolithic axes. They are generally chipped all over, except in one place on each, where the natural surface of the stone is left. Any further information I should be glad to impart. Or should you desire a short article on them I will furnish it. Will also photograph them for you with others that have been found in this vicinity.

WM. WALLACE TOOKER.

Sag Harbor, N. Y., March 22, 1888.

## HUMAN FOOTPRINTS IN THE EOCENE.

*Editor American Antiquarian:*

As adverse sentence has been pronounced before the American Philosophical Society, Nov. 18, 1887, by my friend Dr. D. G. Brinton, on the antiquity of footprints found in a quarry near Lake Managua, and other locations, which was due to a misunderstanding of my letter, leading him to associate *surviving* eocene shells from another locality, eocene sand, on which the Tufas containing the footprints lie, permit me to reply.

An imprint was sent him, and one to Prof. Baird, and the sand on which they lay was sent separate to both parties; the bag of shells contained a slip, stating, "shells from Lake Giloa, or Jiloa, whose entire beach is made up of them," which is six miles north-east of quarry, and considered as belonging to same horizon. This collateral evidence would aid in placing the geological age of the Tufas; as the shells were a new species, and with many others abundant near the old caves, on the southwest slope of the volcanic range, were covered with similar types spread over our northern Territories.

Of those here, not 4 per cent are existing species. The "scaphaca" is not represented among living forms. The same remark applies to many others included in those sent to the National Museum in 1878, private Nos. 187 to 289, still undetermined, but older than those found in the "shell heaps" along the coast range, which was repeopled long after; even these contain old shells, among them the "calistar," are abundant, and though not passing beyond the cretaceous formation, are common among those found in the Territories, while those found near the caves, are much older and pertain to the eocene-tertiary merging into the miocene; there is no doubt that the cave dwellers used them as food, at the same time made the inscriptions of the sea monsters with uncommon accuracy, and some in relief. I was unable to copy one correctly without the aid of instruments, while their authors lying face upwards chiseled them in rock.

That these old masters saw the first eruption, we now consider indisputable, they were near the foot of the volcanoes and on opposite sides, and with the animals of the time passed over it immediately when moistened by rain, leaving their imprints in the plastic mass that soon hardened and preserved them.

The four subsequent eruptions soon followed, shown by their barely perceptible seams. A repose followed of long duration, vegetation crept slowly over the volcanic debris. Forests sprang up; its repeated decomposition, mingled with the wash from the

hills forming the clayey soil, streams carried the leaves and drift seaward or to the ocean bed.

Ages passed and again the pent-up fires burst forth, convulsing the earth, lifting the former accumulations to fall back in fragments that show us its mighty force; hills of the present coast range bulged up through the ocean debris, rolling it over caves and shells, sealing up these records for future use.

Eruption followed similar to the first in the series, covering of ashes falling after the cataclysm, which is nearly as hard as the tufas. The old craters burnt out, once more quiet reigns. Passing showers cool the desert waste, gradually filling old craters, storing water for those to come. Then a soil accumulates and exists to-day. The new hills to the southeast at the same time were fitting up in a similar way, afterwards peopled by a race, or descendants who escaped the convulsion, or came from the Cordilleras. They continued to feed on the shell fish they found, evidenced by the enormous "kitchen middens," accumulated along the coast. We look among these for shells found near the old caves. We rarely find one; others have been evolved. We see by their forms that the people who used and cast them aside, did so in pliocene times. We wander among hills not distant from them, finding their remnants dwindling, and finally disappearing; they, too, had passed away.

We pass over the hills and see the older ones adhering to the fractured limestone, following the streams where they have removed the old sediment that engulfed the caves, we find them, as they existed in remote times; we continue to the strip of land unmoved by the convulsion and find a cave filled with sandstone, not suddenly, like its neighbors, but soon after by the wash from their graves.

We remove the rock, and copy the records on the inner roof of these old men, faithful delineations of animal monsters and others objects or signs. Some are cut with sharp angles with great skill, indicating a people capable of protecting their feet as they walked over the tufas.

No skeletons of these monsters were found; one vertebræ was all that we could add to the shells, its diameter was about ten inches; it probably lies in some quiet corner with the shells, in that great storehouse left by Smithson for the diffusion of knowledge.

Nicaragua is too far removed to awaken scientific attention. Nevada can be visited by rail to inspect footprints of the cucula, while here we wander alone among the hills and vainly try to impress our convictions on others.

A Dordogne artist depicts on horn figures of a horse, whose estimated age is 250,000 years; here those on the cave roofs, on rocks underneath were formed long ere the old master of the



Dordogne was born; his descendants cross the sea and claim the ancient races here, as wanderers from their fatherland; they forget that Noah's children took lessons from the old Egyptians, whose forefathers left this continent ere the children of Israel were born; here they made pyramids of earth, and there of stone.

But why speculate on the days and weeks of the æons since man commenced his wanderings *here*?

In conclusion, for the fifth time, I try to make myself understood when I say that man's works were buried here in eocene times; that the first volcanic eruption containing the footprints lies on sand and other formations of that epoch, while his works are in close proximity with eocene shell beds, and were buried together. Now permits me to carry the mooted footprints, from *Post Pliocene* to their proper place, the *Eocene*.

If you have any doubts as a juror, give me the benefit of the doubts until other witnesses confront me.

E. FLINT.

RIVAS NICARAUGUA, April 4, 1888.

---

## Editorial.

---

Part 48

### PALEOLITHICS.

We have received several pamphlets which treat on the subject of paleolithics. One of them is a circular from the Smithsonian, making enquiry as to the discovery of all such relics, and asking for a description of the same. The other is a reprint from the Proceedings of the Natural History Society of Boston, containing articles by Profs. F. W. Putnam, Charles C. Abbott, G. Frederick Wright, and Warren Upham, on the archæology and geology of the subject. We have in this number given two letters; one from Mr. A. F. Berlin, and one from Wallace Tooker on the same subject. These seem to be a conclusive progress, and those of us who have been very conservative may have to yield the point, that genuine paleolithics in this country have been discovered. There is one point, however, which needs to be cleared up. The auriferous gravels of California seem to have produced a number of statite pots, which have all the characteristics of neolithic relics. If we take the common explanation about the denuding of Table Mountain, on which these relics have been discovered, we must make them almost infinitely older than the gravels of the Mississippi Valley; and thus we shall have neolithic relics antedating the paleolithic relics, by thousands of years, if not hundreds of thousands.

We regard this matter as in hopeless confusion, and must ask the geologists and archæologists to put their heads together, and see if it cannot be unraveled. The letter from Dr. Flint undertakes to set back the matter of the footprints in Nicaragua to the eocene, Dr. Brinton having disputed the extreme antiquity of the deposit. We would ask the same junta of scholars to take this find also into the account, and give us something which shall be intelligible and reasonable in the matter.



*Pl. t. 4. 8*

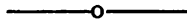
### RUINS OF ANCIENT CITIES IN NEW MEXICO.

The surveys at present being made for the Kansas City, El Paso & Mexican Railroad, which will be built in a diagonal direction through New Mexico from northeast to southwest, promise to bring to the light of modern exploration some regions of remarkable interest which have heretofore been closed to the scientist, on account of their inaccessibility. Between the 33d and 34th parallels of latitude, and at their intersection with the 106th degree of longitude, the surveying parties have passed along a lava flow which by the local population is called the molpais, which is probably the most unique of its kind in America. It consists of a sea of molten black glass agitated at the moment of cooling in ragged waves of fantastic shapes. These lava waves or ridges are from ten to twelve feet high, with combing crests and the whole formation presents the appearance of having been made at a comparatively modern period. This lava flow is about forty miles long from northeast to southwest and from one to ten miles wide. It can be crossed at two places, and its narrow portion, where, in process of time, with infinite labor and trouble two different and difficult trails have been formed.

For miles on all sides of this lava flow, the country is the most desolate that can be imagined. It has been literally burned up. It consists of fine white ashes to any depth which, so far, has been dug down. To the north of the lava flow, and lying in a country equally desolate and arid, the surveyors have come upon the ruins of Juan Quivira, known already to the early Spanish explorers under Coronado, but which have been visited by white men less often even than the mysterious ruins of Palenque, in Central America. Only a few people at Socorro and White Oaks have been at Juan Quivira, because it is at present forty miles from water. The surveyors found the ruins to be of gigantic stone buildings, made in the most substantial manner, and of grand proportions. One of them was four acres in extent. All indications around the ruins point to the existence here at one time of a dense population. No legend of any kind exists as to how this great city was destroyed or when it was abandoned. One of the engineers attached to the

surveying expedition advances the theory that Juan Quivira was in existence and abundantly supplied with water at the time the terrific volcanic eruption took place which formed the lava flow or molpais; that the heat generated, destroyed the whole country and permanently dried up its water supply, and that thus the inhabitants were forced to abandon it and the country generally.

The few Mexicans scattered through this country herding their small goat herds, still have a tradition that untold treasures are secreted under these ruins, and a few years ago an expedition of adventurers left Socorro, N. M., for the purpose of digging for this treasure. They stayed at Juan Quivira and hunted until their water gave out and then returned unsuccessful and disheartened. The student of Mexican history will remember that Juan Quivira was the city in search of which the expedition of Coronado started from old Mexico in 1540. The rumors of such a city reached beyond belief. They were brought to Mexico by Estevan, the negro companion of Cabeza de Vaca, who was a very Munchausen in his tales of immense wealth among the seven great cities of Cibola and other places he claimed to have passed through. Juan Quivira must have been abandoned long before Coronado's time.—*Globe-Democrat*.



#### LINGUISTIC AND ETHNOGRAPHIC NOTES.

BY ALBERT S. GATSCHET.

ODJIBWE LOCAL NAMES OF MINNESOTA, over four hundred and thirty in numbers, and largely names of rivers, lakes and smaller water-courses, have been investigated by the Rev. J. A. Gilfillan, stationed on the White Earth Reservation. The manuscript was forwarded by the author to the Minnesota Historical Society at St. Paul, and then at the request of the author copied and published in the Fifteenth Annual Report of the Geological and Natural History Survey of Minnesota, 1886, (St. Paul, 1887, 8vo) pp. 451-477. The learned author always adds the Indian term to the English name, and in difficult names gives the components in the Odjibwe language. The English name is not always the translation of the Indian name, as may be seen in the case of No. 47, *Eagle's Nest Lake*, whose Indian name—Mukominisiwi-sag—signifies "Bear Island Lake." A supplement to this useful list is promised by Rev. Mr. Gilfillan. The Dakota or Sioux names of the state have been investigated and published in a former report of the same series by Prof. A. Williamson.

THE ZAPOTEC GRAMMAR of an anonymous Mexican author has been published by Dr. D. Antonio Penafiel, and dedicated to the president of the Republic, General D. Porfirio Diaz. (Mexico, 1886, 4to, 149 pp.) It is prefaced by a long bibliographic article on the authors who wrote in Zapotec or upon that language (57 pp., 4to, 1887). The author spells the name Zaapo.

teca. A portion of 'he treatise entitled, "Nuevo principio del arte Zaapoteco," is dated *ano de* 1823 and gotten up entirely according to the old linguistic principles of the missionaries. Follow a number of treatises and several texts of the language, all devotional, by Valdespino, J. de Cordova, P. Wichells, and the volume concludes with a vocabulary of the Zapotec dialect of San Bernardo Miztepeque, obtained in 1856. The language is spoken in Oajaca and neighboring states, and the number of authors who wrote in it is astonishingly large. The bibliographic article is mainly reproduced from S. C. Pilling's Bibliography of the North American Languages.

THE INFLECTIONAL SYSTEM OF THE MAYA LANGUAGES is the title of a German article of 51 pages, composed by Dr. Edward Seler, of Crossen, Prussia, and intended as a dissertation for obtaining the degree of a doctor of philosophy in Leipzig university. It is a successful attempt at a thorough investigation of the morphology of these dialects. Of these, a few only, as Maya proper, Quicheld and Cakchiquel, are known to us, and upon these the argumentation of Seler chiefly rests. Like that of many other Indian languages the verb of Maya is a mere noun, but there are two ways of conjugating the predicative form of the verb. When the pronoun is prefixed to the verbal base, that pronoun is a *possessive* pronoun and the base is a *nomen actionis*; when it is suffixed to it, the pronoun is a *personal* pronoun, and the base is then to be considered a *nomen agentis* or *actoris*. The prefixed pronouns vary considerably according to the dialects and still more so according to the place they occupy, either before consonants or before vowels. When a verbal base is used in a transitive sense, it is preceded by a possessive pronoun prefixed to it; but when a *passive* signification is intended for it, then the personal pronoun is suffixed to it. This is observed with many bases which have to be considered as roots; but other bases prefer to assume a formative suffix besides, as *-tah* in the Maya proper, or *-ax*, *-ix*, etc. The title of this instructive article is: "Das Konjugations-System der Maya-Sprachen." Berlin: press of Unger Bros., 1887, 8to. Dr. Seler is now exploring the languages of Southern Mexico.

THE VERB TO BE has been followed up in all its important functions throughout all the languages accessible to him by Mr. Raoul de la Grasserie, judge at Rennes, France, and the results published in a pamphlet of 128 pages, 8to: "Etudes de Grammaire comparee. Du Verbe: *Etre*, considere comme instrument d'abstraction, etc." Paris, Maisonneuve, 1887. The study of the subject has induced him to classify all languages studied into four categories, which he defines as follows, page 41: (1) Languages in which the substantive verb is or is not used in its proper signification marking *existence*. (2) Languages in which the verb *to be* and other auxiliary verbs serve to express the predicative idea of the verb and as copula to express verbal voices or genders. (3) Languages where *to be* and other auxiliaries serve to express the category of tense. (4) Languages in which the verb *to be* is appended to radical syllables to form verbal stems. A considerable number of American languages are treated or spoken of in this instructive little volume, which the thankful disciple has dedicated to his teacher, Mr. Lucien Adam.

VERBAL TENSES have been treated by the same author in a separate publication (pp. 195, Paris, 1888). He clearly distinguishes between real tenses

and tenses standing in a relative position to the tenses of other verbs; between subjective and undetermined tense forms, also between real and imaginary tenses. The last chapter deals with the auxiliary verbs forming tenses, exclusive of the verb *to be*, treated beforehand.

THE GEOGRAPHIC SOCIETY of Berne, Switzerland, has just sent to its correspondents the eighth annual report, embodying articles read from 1885 to 1887. These reports always contain something about America, and we often hear of Swiss travelers visiting the tropical parts of the western hemisphere. The present report has letters from San Salvador composed by Em. Hegg, dealing with subjects like the canal at Panama, eruptions of a Central American volcano, and on local politics. Prof. Ernst Rothlisberger gives a long and interesting account of his visit in Venezuela and the republics of Colombia, made in 1882, which he intends to enlarge with other matter and publish in book form. He has published in one of the former reports a vocabulary of the Indian language spoken on the isthmus, but does not state with exactness from what tribe of Indians he obtained it, a circumstance which greatly reduces its value.

MR. FRANKLIN A. SEELY, U. S. Patent Office, Washington, has composed an elaborate treatise upon "the development of time-keeping in Greece and Rome," which has been printed in the first number of the *American Anthropologist*, issued in January, 1888. The author now wishes to enlarge the article, in gathering as much information as possible upon the modes of time-keeping among savage races and in the lower form of civilization, ancient and modern, including existing oriental peoples, prior to or apart from the introduction of European ideas, and the extinct civilizations of America. He intends to include also the history of time-keeping in Europe, particularly from the beginning of the Christian era to the close of the 13th century, and among the Saracens, Moors and Byzantines. Information on any of these subjects will be gratefully acknowledged by Mr. Seely.



#### NEW DISCOVERIES.

PRE-HISTORIC PALACE AT MYKENAI.—Mr. Adler has given the details of the discovery. Houses arranged in terraces, with stairs, corridors, small courts, and store-houses, in the lower strata; above these a palace with a stone stair-case leading to the court, contains a circular fire place, decorations belonging to the style of the Mykenaiian vases. Above the palace was a temple on the ruins of the old royal dwelling—*American Journal of Archaeology*, May, 1888.

DR. SCHLIEMANN'S EXPLORATIONS.—A discovery of the early temple of Aphrodite at Kythera, a closed structure with two rows of Doric columns, four on each side of extremely Archaic style. On the hilltop near by are the remains of a Cyclopean fortification belonging to the seventh century, B. C. The worship of Aphrodite appears to have a Phœnician origin. *Ibid.*

NEW WORK BY PRAXITELES.—A head in Parisian marble resembling the Hermes of Praxiteles in the molding of the forehead, treatment of the hair

and general characteristics,—supposed to be a head of Euboulus whose name is a synonym of Haides.

**DISCOVERIES AT ATHENS.**—The ancient road from Athens to the academy of Plato has been discovered. The road is not paved.

A second museum on the Acropolis is to be built for the numerous antiquities which have been discovered.

One of the most ancient sculptures ever found upon the Acropolis is the bearded head of a man of heroic size, the hair and beard painted blue and the face red; recently discovered. It appears to be the head of a Triton, the rest of the body in the form of a serpent ending in the tail of a fish.

**AN ANCIENT ROYAL PALACE,** which occupied the entire summit of the Acropolis, with steps built from immense blocks of stone similar to those of Tiryns, has been discovered. A facade built of large unworked blocks, as in the Pelasgic walls of Tiryns, was disclosed. Some fragments of Archaic sculpture. The earliest extant representing Herakles engaged in contest with the Hydra and with Triton.

**DISCOVERIES IN CYPRUS.**—Various pavements and walls, also eleven Greek and Kypriote inscriptions of the Ptolemaic period, also two statues, and pottery of the Kypriote style have been discovered at Paphos. A Babylonian cylinder, with two lines of cuneiform inscription has been found in one of the tombs of Parashevi. The pottery is supposed to be pre-Phœnician, decorated with the figures of a snake and deer.

**MOUNDS IN RUSSIA.**—A diary kept by Count A. Bobrinsky between 1879 and 1885, gives an account of the investigation of fifty-three mounds in the Amyela, Russia. Two races were buried in these mounds:—One with flint arrows and knives, lumps of pigment for tattooing; they had remarkably long skulls; the other race buried above the first, with bronze relics and clay vessels, and iron implements, having held intercourse with the Greeks. Their skulls were entirely different. † See the Nation for March 29, also "Amer. Jour. of Archæy.," March, 1888.

**SURVEY OF WESTERN MOUNDS.**—Mr. T. H. Lewis surveyed in 1887, 1,100 pre-historic mounds in Minnesota, Dakota and Wisconsin. He discovered six ancient enclosures or forts, four in Minnesota and two in Dakota.

**NEW ARCHÆOLOGICAL REVIEW.**—A journal of historic and pre-historic antiquities, edited by Mr. G. L. Gomme, published by David Nutt, London, Eng. The topics to be treated are as follows: Anthropology, Archæology, History and Literature, but mainly from an English standpoint, that as related to the antiquities of Great Britain.

## BOOK REVIEWS.

*History of the People of Israel till the Time of King David*, by Ernest Renan, Author of the *Life of Jesus*. Boston: Roberts Bros.

The author approaches the subject from an ethnological standpoint. He speaks of the Nomad Semites, of the Hebrew group, of the *Beni-Israel*, the Babylonian influence upon them, of the monotheism and absence of mythology of the Hebrews, of the name of Jahveh as of a local divinity, and of the religion of the Israelites as he *would* of any other ethnic system. He then goes on to describe the influence of Egypt upon Israel; the history of Israel in the desert, and the subsequent occupation of the country of Canaan; the development of Jahvehism, in Canaan; Jahveh becoming the protecting deity of Israel bound to declare that they were right even when they were wrong. He then passes on to the progress of the religious organization under Samuel and the reign of Saul, down to the time of David. The history is such as Renan would be likely to write. He takes a middle ground between the science of ethnology, and the tenets of orthodox theology; and seeks to explain the scripture record in this way, making the religion contained therein, to be like any other ethnic religion. He is, however, an idealist. He says, "The ancient patriarchs of the Syrian deserts were, in reality, corner-stones for humanity. The charm of patriarchal life had an invincible spell over the imagination of the succeeding centuries, henceforth the tendency of the Semitic people will be to rejuvenate the visions of this distant age. They did not create a myth, they were recalling a memory, and this memory of a lost purity and happiness was ever tempting them to revert to a state, which had left an indelible trace upon the character of a nation." "The march towards montheism is in reality nothing more than the return to the intuition of their early history. Egypt far from contributing to the religious progress of Israel, put obstacles and dangers in the path in which the people of God were to tread, and during the century which had passed in Egypt Israel had multiplied, but the spirit of the Nomad tribes had been gradually fading away. The mild families of shepherds, pastors, whose passage the sedentary people had welcomed with delight, had become a hard, stiff-necked people." "The rude analogies upon which primitive theology was constructed, naturally led to the formation of a celestial court of Israel. In general Jahveh was impalpable, invisible. He was very inferior to the ancient Elohim. Religion was, so to speak, personal. Let us put our trust, above all, in humanity, which always gains in the end and has the power to transform what it loves." This is the idealistic view, whether the view will account for all the superior character, which belongs to the God of the Hebrews, is a question. Generally, this superiority is ascribed to a supernatural source. Renan makes it natural. The book seems to have been the result of a life of study. The author says "in carrying out the plan which he formed forty years ago of writing the history of the origin of Christianity, I ought to

have commenced with the present volume." It is probable that if this had been the case, the book would be at present out of date, possibly the position would have been changed, still the author is independent, and holds the same position which was adopted by him in the "Life of Jesus." He has not yielded to the Wellhausen theory. It would seem that Renan reviewed the subject from a literary and idealistic standpoint, and Wellhausen and Kuenen from a linguistic and critical standpoint, but their views are in great contrast. Renan gives the Abrahamic times credit for monotheism, but Kuenen makes monotheism a result of the development, and only introduced after the times of the exile. With these differences existing between the critical scholars and those who hold the old theory of a primitive revelation, we do not consider the book a valuable contribution.

*Social History of the Races of Mankind.* Second Division: Oceano-Melanesians.  
By A. Featherman. Trubner & Co., Ludgate Hill, London.

This is a very thorough-going description of the races of the islands of the Pacific; a description which will be valued because of its rarity. The author has given a great deal of time to the study and has brought out very important facts. But the book is marred by misrepresentations. He seems to have a prejudice against the missionaries, and at times is unfair in his treatment of them; though he says "they have furnished him important materials for his work; which are of the greatest value to sociology. Their description of the manners and customs of savages are clear and credible, and can be accepted as according with the reality of things." The author ascribes all the vices and demoralization of the heathen to the missionaries, rather than to the contact with modern civilization; and seems to think that the early condition is better than the later; the simplicity of heathenism better than the improvement of Christianity. Aside from this the book will be sought for as a source of information in reference to these races. The author has, to be sure, given only those traits and peculiarities which are on the surface and belong to the external life; he has not endeavored to trace out their system of consanguinity, or the relation of their languages to one another, or even to compare their systems of religion. Occasionally the legends and traditions of their origin are given, and descriptions of the superstitions and religious customs are contained in the book, but no tracing of one from the other, and no philosophizing about any of them. One thing is noticeable in nearly all of the races of the Pacific ocean; they seem to be wonderfully addicted to sensual pleasures. Mr. L. H. Morgan has explained this in a novel way. He states that the Puna-luan family was formed by a company of so-called brothers marrying a company of so-called sisters; and within the bounds of this circle, there was promiscuous sexual intercourse. Mr. Featherman has nothing to say about this system, and yet some of the facts that he states would indicate that it may have existed. It would be interesting if some one could study the social system of these races and ascertain for a certainty whether such a system actually existed. Another point is important also. Mr. Morgan speaks of the Turanian system of consanguinity, as contrasted with the Malayan. The so-called Pun-aluan marriage gives rise to the first system; what he calls the consanguine marriage giving rise to the Ma-



layan system. The Malayan system came in with the consanguine family and has an antiquity of unknown duration, and was displaced by the Turanian, which in the end gave rise to the establishment of Gentes. The inhabitants of Polynesia are included in the Malayan family. Mr. Featherman says nothing of these systems; and we are left in doubt whether the generalizations of Mr. Morgan are to be accepted or not. One will need to read through the lines of Mr. Featherman's book to discover Mr. Morgan's theories; and even after he has read this book he is not quite sure that Mr. Morgan is correct. The science of sociology is still unsettled. Mr. Featherman has furnished much material as foundation stones. His book should be in every Ethnological Library, and is a very valuable addition to the literature.

*Ancient Society in Tennessee. The Mound-builders were Indians.* By G. P. Thurston, Nashville, Tennessee. A paper read before the Tennessee Historical Society of Nashville, Dec. 19, 1887. Published by order of the society. Reprinted in the Magazine of American History, May, 1888.

This is another of the articles which are growing quite numerous, whose object is to show that the Mound-builders were Indians. If we could have the other side advocated, we would come nearer the truth: for the dissimilarities are what we want, rather than the similarities. The great mistake made by most writers is, that they hold that the Mound-builders were all of one class, whereas they were of different classes. We agree with Mr. Thurston when he says that the stone grave race and the builders of some of the ancient mounds were Indians; ancestors of the Indians found by the whites in this general section. But archaeologists recognize a strong contrast between the "stone grave" people and the builders of the pyramidal mounds. Walled towns and stockades were erected by Indians who buried in stone graves. Indians also builded their houses upon the artificial mounds and truncated pyramids; but preceding populations must be acknowledged. The earlier Mound-builders must be regarded as differing from modern Indians; though some will persist in making them so wonderfully different that no one can undertake to show the difference without being misunderstood. So far as this article goes, we regard it as conclusive; but Gen. Thurston will probably acknowledge that there is a difference between the earth-works and the relics of Indians, which would prove that successive tribes had overrun this region. This is the point which we are anxious to have taken up, and to learn about, The characteristics of each. The dissimilarities are more important than the similarities.

*The Journal of American Folk-Lore.* Edited by Franz Boas, T. Frederick Crane, J. Owen Dorsey; W. W. Newell, general agent. Boston and New York: Houghton, Mifflin & Company. Subscription, \$3.00; single numbers, \$1.00

This journal starts off with remarkable strength and completeness of equipment. It was but a few years ago that the secretary of the Folk-Lore Society of Great Britain proposed to the editor of this journal to establish a branch society in America. But after corresponding with various parties, the effort was abandoned. Fortunately, however, there has been a combination of gentlemen in Boston, in Washington, in New York, Philadelphia,

and many other places; and as a result a strong society is established. A few persons have been left out from the membership who should have had a prominent part. But this is excusable, inasmuch as there is more or less provincialism in this country; and it seems to be difficult for parties located in certain sections to recognize the workers located in other sections. We see no remedy for this, except for each section to have its own local society, and its own organ of publication. In that case there will be a recognition of the actual workers and the students in ethnology will be aware of one another's existence.

*Catalogue Minnesota Historical Society, 1888.* Vol. I. A. L. Vol. II. M. Z. St. Paul; Pioneer Press Company.

The growth of libraries at the West has been very rapid within the past few years. Historical Societies have had very considerable patronage from States, and as a result, have been able to collect extensively. The three States, Wisconsin, Minnesota and Kansas are in the lead. These libraries serve not only as reference for the citizens dwelling at the capitals, but to a certain extent, to literary gentlemen who reside in the vicinity. This society was organized in 1849, and during the war it died out; in 1864 it was resuscitated; in 1881 a fire in the capital occurred. The present library is the result of about seven years labor. It contains 14,431 bound volumes, 13,593 pamphlets, and is valued at \$50,000. Mr. John Fletcher Williams has been librarian from the beginning, and to his indefatigable industry must be given the credit for the growth and the prosperity of the society.

*Beauty Crowned; or the Story of Esther, the Jewish Maiden*, by Rev. J. A. Fradenburg, Ph. D., D. D. New York; Phillips & Hunt; Cincinnati, Cranston & Stowe.

The light which archæology throws on ancient life in the East, is illustrated by this book. The beautiful story of Queen Esther is here put into a new setting. The picture is the same as that given in the Scriptures, but the frame is different. Some might think that the attention was called to the frame more than to the picture, as there is a constant dwelling upon the archæological history and surroundings. Still the story proves more attractive after one has read the descriptions of the palace and the various personages that figured in the palace. The vast kingdom, the magnificent palace, the banquet of wine, the queenliness of beauty, the decorations of beauty, the magnificent heroism, the poetic justice are subjects on which the author dwells. It is a very readable book, and shows great familiarity with the customs, and peculiarities of the Assyrians and Persians at the time of King Xerxes during the reign of Queen Esther.

*Discovery of the Origin of the Name of America*, by Thomas De St. Bris. New York.

The object of this book is to prove that the name America was derived from a district in the north part of South America, which was discovered by Columbus on his third voyage. The author gives a history of the voyages to this region, and quotes the language of the voyagers when they gained the name of the district. Among the navigators are Columbus, Amerigo Vespucci, Sir Walter Raleigh. It contains also a description of Balboa's discovery, and Pizarro's conquest. The name America, it appears, was applied to the region including the United States of Colombia, Venezuela, Ecuador and Peru. The book contains a description of the Incas of Peru

and their palaces. It is a scholarly production, and the author thinks he has made out his case. It is well illustrated and is offered for sale by the American News Co., New York, for 50 cents, paper cover.

*Irish Wonders. The Ghosts, Giants, Pookas, Demons, Leprecauns, Banshees, Fairies, Witches, Widows, Old Maids, and other Marvels of the Emerald Isle.* By D. R. McAnally, Jr. Illustrated by H. R. Heaton. Boston and New York; Houghton, Mifflin & Company.

This is a very amusing and interesting book. The author spent many months in passing around among the Irish cottages and gathering the ancient tales and Folk Lore, and has presented them in the exact language in which they were told. It is amusing to notice how the same tales which have a world-wide circulation will sound when repeated in Irish blarney and clothed with the imagery peculiar to the Irish peasantry. Any one will enjoy reading the different stories whether he is interested in folk lore or not; but back of the amusement there is a very considerable amount of instruction. The publishers have presented the volume in elegant shape, excellent type, sumptuous binding and tinted paper. It is an elegant book and will serve as a delightful pastime for any gentleman's family.

*The Primæval World of Hebrew Tradition*, by Frederic Henry Hedge. Boston; Roberts Bros. 1870.

This little volume treats of the Bible account of the creation and of the early condition and history of man, from the semi-theological standpoint. The author takes the middle ground between the literal interpretation of the scriptures, and the scientific statement of facts, and endeavors to reconcile the two. The book was written, however, anterior to many of the discussions which have come up; while it is suggestive, it is somewhat out of date. Very little is said about Genesis and geology, and for this the reader would need to go to other books. The novel opinion is advanced that Adam in Paradise represents man at an advanced stage in history, the primeval man having ante-dated this record. It is, however, an opinion only; it is not substantiated by facts. The book is interesting, in its style, and proves very suggestive to the reader. It will help any one who desires to reconcile the scripture record with scientific facts.

*American Notes and Queries.* A medium of inter-communication for literary men, general readers, etc. Vol. 1, No. 4. Published weekly by William L. Walsh, 619 Walnut street, Philadelphia.

This little journal is full of information on all curious and out-of-the-way matters. It may be said to serve the same office in the modern literary world, that THE ANTIQUARIAN does in the prehistoric world. The editors are prominent literary men; one of them is the editor of Lippincott's Magazine, and is the president of the Journalists' Club.



#### BOOKS RECEIVED.

*Eleventh Report of the State Board of Health of Wisconsin.* 1887.

*"The Evacuation of Battery Wagner, and Battle of Ocean Pond. An address delivered before the Confederate Survivors Association in Augusta, Georgia, on Memorial Day, April 26, 1888, by Col. Charles F. Jones, Jr., LL, D."*





FOUR BEARS, 1832.



RUSHING EAGLE, 1872.



THE  
*American Antiquarian.*

---

VOL. X.

SEPTEMBER, 1888.

No. 5.

---

✧ TWO MANDAN CHIEFS.  
7

It was in 1832 that George Catlin ascended the Missouri and made his first acquaintance with wild Indians. He traveled on the first steamer that went as far up the stream as the Mandan villages. Of all the tribes which he visited on that journey, the Mandans seemed to interest him the most. This was, no doubt, partly due to the fact that the Mandans were a more interesting people than some of their neighbors; but it was largely owing to certain favoring circumstances connected with his sojourn among them. Their greatest annual ceremony occurred during his visit and he found in the person of Mr. Joseph Kipp, the factor of the American Fur Company at Fort Clarke—the Mandan trading-post—an unusually intelligent and obliging interpreter. Perhaps, too, during his long and pleasant visit at Fort Clarke, where he was the guest of Mr. Kipp, he imbibed something of the partiality for the Mandans which the latter individual naturally felt. I have often observed on the frontier that white men, who have lived long with any particular tribe of Indians, acquire a great sense of loyalty to such tribe, that they hate its enemies, love its friends, sound its praises and maintain its superiority to all other tribes. Had Catlin had opportunities for witnessing the great ceremonies of other tribes, under the conduct of guides as intelligent as Mr. Kipp, he would perhaps not have considered the Mandans so superior to their neighbors as he represents them in his writings.

So highly did he esteem them, that he thought it proper to seek a European origin for them. But the search for specific old-world origins for the people of the new world was one of the ruling manias of Catlin's day. No one seemed capable of writing about the Indians then without advancing some pet origin-theory. It was a day of easy scientific speculation, and the ar-



guments of Catlin were as free and untrammelled as those of any of his cotemporaries. His theory that the Mandans were descended from Welshmen who "sailed in ten ships, under the direction of Prince Madoc from North Wales, in the early part of the fourteenth century," has little value in the light shed by modern discovery.

Five years after Catlin's visit to the Upper Missouri Valley the smallpox was introduced into that region, and the Mandans, owing to the nature of their villages, suffered more severely than their nomadic neighbors. Catlin believed they were exterminated; he had heard exaggerated reports to this effect and credited them. A sufficient number, however, of the tribe was left to maintain its organization, its language and its elaborate religious ceremonials. In his last work, entitled "Okeepa," published in 1867, appears a letter from Kenneth McKenzie, written at the Mandan Village in 1839, from which we quote the following: "Of the Mandans between forty and fifty were all that were left when the disease subsided. The Riccarrees soon after moved up and took possession of their village, making slaves of the remaining Mandans, and are living in it at the present time. A few months after the Riccarrees took possession they were attacked by a war party of Sioux, and in the middle of the battle, the Mandans, men, women and children, whilst fighting for the Riccarrees, at a concerted signal ran through the pickets and threw themselves under the horses' feet of the Sioux, and, still fighting, begged the Sioux to kill them 'that they might not live to be the dogs of the Riccarrees.' The last of the tribe were here slain." (P. 50). Notwithstanding this melancholy tale we find by consulting the "Report of the Commissioner of Indian Affairs" for 1885, that 410 Mandans then survived, 340 of whom drew rations from the government in that year. He who doubts that they are the same race as that which Catlin saw need only collect a small vocabulary of their present language and compare it with the vocabulary of Catlin, collected in 1832, or that of the Prince of Wied, obtained in 1833, to remove his doubts. As late as 1870 I witnessed a portion of the ceremony of the Okeepa and saw enough of it to convince me of the faithfulness of Catlin's description of this awful rite, written in 1832.

My first acquaintance with the Mandans was made in 1865. At that time all recollection of Catlin's visit was lost, both by the Indians and the whites who lived among them. White men who had traded for years among the Indians knew nothing of him. About four years after my first arrival on the Upper Missouri, I succeeded in getting a copy of his "Illustrations, Etc., of the North American Indians," in two volumes. This was before the days, not only of railroads and express offices, but even of regular post-offices and post-roads in Northern Dakota, and the introduction of rare books was no easy matter. The work cre-

ated the liveliest interest among the Indians. I lived then at Fort Stevenson (now an Indian school), some sixteen miles distant from the village where the remains of the three tribes, called by Catlin the Mandans, Riccarees and Minnetarees, were living together. The news soon spread among these Indians that I had a book containing the "faces of their fathers," and ere many days my quarters at Fort Stevenson were thronged with eager visitors. The portraits, although appearing in Catlin's plates only as light unshaded etchings, were generally readily recognized by the children and the grand-children of the departed heroes represented. The women rarely restrained their tears at the sight of these ancestral pictures. The men seemed to have less feeling and interest; but I soon had evidence that their indifference was affected.

Those who have read Catlin's works are aware that his most honored Indian hero was Four Bears, a chief of the Mandans. He devotes one full-page plate to Four Bears' portrait, another to his hospitality, four to his buffalo-robe, an entire chapter to his personality and history, and he often refers to him elsewhere in his various works. Among those who came to see my books was a son of this Four Bears, named Rushing Eagle, or (as he was more familiarly called by the whites) Bad Gun. Rushing Eagle was then second chief of the Mandans. He had already earned a high reputation for himself as a warrior and counselor. He was very gentle in his manner, reticent, dignified and disinclined to beg favors of white men. At the time of which I am speaking he was a middle-aged man; his father had been dead over thirty years and I did not suppose his recollection of his parent could be very vivid. At the first sight of the picture of Four Bears he showed no emotion, although he regarded it long and intently. While he was gazing at it I was called on business out of the room and I left him alone with the book, telling him, correctly as I supposed, that I would be gone some time, and asking him not to leave until I returned; but in a few moments I was obliged to come back for something I needed. When I re-entered the apartment I found him weeping and addressing an eloquent monologue to the picture of his departed father. Of course I intruded as short a time as possible on this scene and left him alone a long time so that he could "have his cry out."

In 1872, when an itinerant photographer made a tour of the upper Missouri, going as far as the mouth of the Yellow-stone, I had a ferrotype of my friend Rushing Eagle made, the pose of the head approximating as closely as possible that of Catlin's picture of Four Bears. I have carried this ferrotype around with me ever since, and quite recently I have had it copied with admirable fidelity by the Moss Engraving Company, of New York. ("Mosstype.") I desire here to call attention to this picture in connection with Catlin's portrait of the elder chief,

taken forty years earlier, and for this reason I introduce an enlarged copy of a portion of Catlin's etching of Four Bears, which latter is a full-length portrait. The old men of the tribe told me that Rushing Eagle was the image of his father. Such a great resemblance does not appear in the etching; there is a general likeness, but taking feature for feature there is much dissimilarity. Remembering that Catlin's original pictures of the Indians were oil paintings and that the etchings were but copies, I determined to examine the original which now hangs, with the rest of the Catlin collection, in the lecture-room of the National Museum, at Washington. Quite recently, (May, 1888,) at my request, Prof. Otis T. Mason kindly had it removed from its lofty perch on the south wall of the lecture-room, and together we compared it with the etching and with the picture of Rushing Eagle. It was evident that the etching was not a careful copy of the oil painting, and we agreed that the latter bore a greater resemblance to the picture of Rushing Eagle than the former. In the etching the line which marks the anterior border of the cheek curves backwards from the *ala* of the nose, while in the painting it extends in a straight line down to the angle of the mouth, as in the face of Rushing Eagle. The etching shows a mouth of classic curves, the oil painting represents a well formed but unconventional mouth like that seen in the accompanying Mosstype. The jaw in the painting, like that in the Mosstype, is heavier than in the etching. In both the painting and the etching the eye seems set unnaturally far back.

In comparing the etching, or even the original painting, with the portrait of Rushing Eagle, we must remember that Catlin's pictures were necessarily hasty sketches, in which he sought rather to "catch a likeness" than to copy the face with painstaking exactness, and we must also bear in mind the great differences to be observed between portraits of our own historic men, painted by different artists, under different circumstances and at different periods of life. Often, in comparing such portraits, we recognize in them a common subject only by some prominent feature or by the accessories of dress.

In the accompanying engraving of Rushing Eagle some expression of sadness or melancholy may be detected, which is not to be seen in the portraits of his father, and closely as this engraving copies its original, the sad expression is still more pronounced in the ferrotype. Possibly the difference results from a failure on the part of the portrait painter to transfer the mournful glance to his canvass; but if it is inherent in the living models we need not wonder. Four Bears, when Catlin knew him, was a leader of a happy, well-fed and prosperous people, while his son, when he sat before the camera, was one of a starved and oppressed remnant, whose horoscope grew darker from day to day.

WASHINGTON MATTHEWS.

## THE RAVEN'S PLACE IN THE MYTHOLOGY OF NORTHWESTERN AMERICA.

[II PAPER.]

In my former paper I gave an account of the Raven and his works of creation, from the time when he (Ne-kilst-luss) in the form of a raven, brooded over the dense primeval, chaotic darkness, down to a time, long contemplated by him, when he got the world into a state of order, fit to maintain a race of beings of a higher order than any previously made; a race of beings, part of himself, bearing his own image and likeness—mankind, which, according to tradition, was made as follows:

When Ne-kilst-luss had a fit home for man on this earth, he was one day walking along Nailcon's long and sandy shore, he found a cockle (*Cardium Nuttalli*), thinking it would make a good mother for the new race he was about to form, had connection with it and passed on.

Journeying that way nine months later he found the cockle still in the same place, stopping to look at it he heard it emitting whistling sounds resembling "peep," "peep." In order to see what was coming, he waited. In a little while it gave birth to six little beings, of which he was the father.

According to what seems to be the best authority, these six little beings seem to have been hermaphroditic, or having both sexes in one person. From three he took away the male principle and from the other three the female. On the first three, in order to make their sex more complete, he placed on the abdomen of each a sea snail.\* Afterward he told each couple to live together as husband and wife, and to beget children, which they did. From these three couples sprung the three great families of of mankind—the brown, white and black. I have heard some of the Haidah tribes say that only they themselves sprung from such a parentage.

The Haidas of Southern Queen Charlotte's Islands say that Ne-kilst-luss, while walking around a part of their country known as Sand Spit Point, found a cockle lying on the beach, from which were faint cries issuing. While examining with great wonder, the voices grew louder and louder, until finally there issued

---

\*Blech de mer.

therefrom several male infant children, which rapidly increasing in stature joined him in a common search for mates.

Upon reaching the lonely island of Ninstints they found sea snails clinging to the rocks, of which Ne-kilst-luss selected a number. Then taking half of the party aside, put a sea snail on the abdomen of each, turning them into wives for the other half. From these sprung all the people on the earth. At first the race was very crude and ill-shapen, having long arms and crooked legs—altogether unable to walk upright. I have studied the traditions of various tribes on the subject, and find that from the above as a starting point, each succeeding race gained all they possessed physically by evolution. To enter into a detailed account on that subject in this paper would take me too far from my original, so will have to leave it for another one.

Ne-kilst-luss, besides assuming the shape and form of a raven to enable him to fly about amongst the people in order to discover their wants, had other messengers. Like Odin, who had two ravens, he (the raven) had, at least, the butterfly, whose functions were the same.

On a tall column in front of a ruined house in the deserted village of Kivoota, Queen Charlotte's Islands, is engraven the following: First, placed high on the column, is a large raven; in front of him is a butterfly, represented in the act of returning from a journey; behind the butterfly (lower down on the column) is a monstrous mosquito. Below the mosquito is a Scamsquin or sparrow hawk, represented as catching the insect, if I may be allowed the name, for it is nearly as large as a common bat, such as usually fly about of an evening. These figures tell of a legend long preserved amongst the Haidah tribes, which is as follows: Very long ago, this country was a great deal warmer, and the climate a great deal moister than it is now, and the sea was higher up on the land. In those days the mosquitoes were very much larger than the largest nowadays and terribly ferocious, as well as more numerous. Many people died from their awful bites. The people were afraid of them and cried for deliverance. The raven hearing their cry sent the butterfly to go over the country to observe, then return and report. After receiving the report he sent the Scamsquin or mosquito hawk properly, and gave him and all his descendants the mosquitos as food. Although he had the *mamma chicka* (dragon fly) every summer to help him, he had more than he could get away with, even afterward, when it seems the climate grew colder and less humid, while with these changes the Shikul-di-gwah (mosquito) grew less and fewer.

According to the traditions of several tribes, the climate seems afterward to have become so cold that the people were in want of something whereby to warm themselves. At this turn of

affairs, Ne-kilst-luss got them fire, as follows, all the fire in the world being in possession of the before-mentioned chief, Setlin-ki-jash: This time he did not dare to again appear in the chief's house, nor did his daughter longer show him favor. Assuming, therefore, the form of a single needle-like leaf of the spruce tree he floated on the water near the house, and when the girl—his former sweetheart—came down to draw water, was lifted by her in the vessel she used. The girl, drinking the water, swallowed the little leaf without noticing it, and shortly afterward became pregnant, and before long bore a son, who was none other than Ne-kilst-luss, who had thus gained an entry into the house. In the process of time, watching his opportunity, he one day, while in his raven guise, picked up a burning brand, and flew out as before by the smoke-hole at the top of the house and carried it away. Soon after every one not only had fire, but also learned how to get more.

The Stickse and Tongass tribes of Southern Alaska say that their forefathers wanted fire or something to warm themselves and houses, while all the fire was hid away on an island of the ocean. In order to let mankind have the benefit of it, the raven (Yehl) flew over to get some. Picking up a brand, he flew back with it in his beak. Before the Alaskan shore was reached, the distance being so great, most of the wood and part of his beak were burned away. Arrived there he dropped the embers at once, and the sparks flew about in all directions, among various sticks and stones; therefore it is that by striking these stones and by friction on this wood, fire is always to be had.

I have given their ideas of the advent of mankind; and when the humidity of the earth produced huge mosquitos, to the injury of the race, of how the mosquito-hawk was sent, in order to abate the evil; and how when a time came that the climate grew so cold that the people had to be provided with fire. We have also seen how, in order to get that fire, he went somewhere to an island of the ocean. We have also seen how he suffered the loss of part of his beak rather than that his people should starve in the cold. In connection with this cold there is a tradition of ice coming suddenly and covering the land, which made the people flee before its ravages. Of this in another paper. I shall next give a remarkable tradition in connection with a change of the seasons. In order to give the best account I shall quote a version of it which I found amongst the above-mentioned Tongass tribe.

"You ask me for stories of the long, long ago, which I learned from the old people," said Cuthlac, my informant. "I will tell you one; so write it down."

The old people tell us that long ago, when their fathers lived, the winters were long and cold. For nearly six months the ground was covered with snow and ice, which made it very dis-

agreeable for them. So, in order to make it better for all, Yehl called together in council a number of the inhabitants of earth. Amongst the number present at this council, tradition has preserved the following: Sahgetty, the Beaver; Coudge, the Bear; Saugh, the Raccoon, and many others. At the opening of the meeting Yehl said he had called them together to consider the length of the winters, which were altogether too long, and as the time had come in which to make some alterations, he hoped at this meeting they would be able to fix for all time the number of seasons for each year, and the number of months therein. As for himself he thought that it would be proper to have four seasons—spring, summer, winter, and autumn, each having three months. Twelve months, or thirteen moons, would, he said, complete the circuit of the year. As they were all here, he said, he would like the opinion of each. Some of them agreed with Yehl, and thought his system ought to be adopted. Others thought there ought to be four months of winter and three months of the others. At this time Saugh (raccoon) arose and holding up his five fingers, said, put as many months in all the other seasons as you please, but in winter put five months, in order that I may then have a long sleep. On hearing this Yehl said, you are too selfish. Wrenching off two of the Saugh's fingers he said, I leave you three fingers; three months there shall be in every season from this time onward forever. When you see certain stars return to certain points in the heavens, you will all know that the circuit of the year is complete. Also at a certain time every year the *voluchans* and salmon shall run in your rivers. I give you a sign, when mists shall cover the land these fish shall visit your streams. According to tradition, the raccoon used to lay dormant all winter, whence came the wish to continue so.

I shall next give an account of the raven's connection with a flood. As far as I have been on this coast, and that has been far and wide, I have not as yet found a people, nor seen a single tribe, who have not a tradition of an immense flood, which covered all the country in which they lived, no matter how high and dry or scant of rivers, or far inland their country may be. In every instance the tradition has a local coloring, all have a mountain in their neighborhood to which the people fled for safety, and from which, after the waters left, the few who were saved resettled the lands they formerly occupied.

Some accounts are very sensible, while others are very foolish and show the mental calibre of the people amongst whom they are found. Generally no cause is given for such a catastrophe. In one instance only do I remember of its being said to have been sent as a punishment for the ungratefulness of the people. Also in one account it seems to have been the effect of an upheaval or subsidence of the crust of the earth. I shall give these

two versions, not only as the most sensible, but because of the Raven's connection with them. The first one I shall give, I had from the before mentioned Tongas man Cuthlac.

"You wish me to tell you of the Heen Clane (great waters), I will tell you what has come down to us through the old folks from the long ago. After Yehl had supplied the people with light, fire, food and water, they were contented for a time, but soon grew tired and wished for something better; for a long time Yehl paid little attention to their unjust demands, but when succeeding generations grew worse and worse he was determined to punish them. So at length he sent a flood of water, which drowned them all but a few, who in their canoes fled to one of the high mountains in their neighborhood, where they lived as best they could until the waters left, when they came down again."

As that is the only tradition in which mention is made of the people's sins being the cause of the flood, I have given it, believing that my informant has mixed it up considerably with what he has learned from the white people.

The general account of the flood given by the Southern Alaskan tribes, of whom my informant tribe is one, is as follows: In the days of the old folks, very long ago, there came a time of terrible thundering and lightning, with torrents of rain. Along with these came heavy and long continued shocks of earthquakes which rent the earth, broke down the old mountains and raised new ones. Besides the torrents of rain which fell, water rushed up through the rents in the earth, and the sea came surging over the land, caused by its constant heavings. The terror-struck people fled in their canoes, hoping to reach a place of safety, which few ever did; many were swamped by the surging waters; by the floating wreckage, and by being struck and upset by logs and trees, whose roots were loosened by the rending earth, and borne upward by the rising waters, struck their canoes underneath.

After a time of fearful perils, a few gained a mountain whose top towered high above the waste of waters. In the safety afforded by this mountain they lived until the waters left when they returned to the low, but sadly altered lands.

The account of a flood given by the Haidas of Queen Charlotte's Islands, British Columbia, is very much to the same effect. The one I am about to give I had from an old Haida chief named Captain Gold, and is as follows: Very long ago there were wars of the elements, the Great Chief above joined with the Great Chief below to destroy this part of the world; the former sent forth his warriors thunder and lightning, with torrents of rain. The latter also sent forth his warriors, earthquakes, upheavals and subsidence of the earth, up through whose rents the water rushed from beneath; soon everything was covered by a seething, rapidly-rising ocean. The people half dead with fright took to their canoes, which afforded little safety in the awful war. As might be expected, ex-



cepting a few who reached Gumsheva mountains, the highest on these islands, and whose high top was far above the waters, all the others were lost, their canoes being smashed and swamped in the terrible conflict.

In the fastness of this mountain they lived until the water left, when they went to find their old homes; but, ah! alas! how changed. Instead of a wide level country stretching southward from a range of hills, nothing but a few small islands were left, and all the mountain valleys were turned into long arms of the sea. The above mentioned chief is simply the spirit who rules the elements above, and the chief below is the spirit of the earth, that is volcanic action or force.

The next I shall give is a very remarkable legend of how the world was re-peopled after the flood. This one is the best of any of the sort I have yet found. I first heard of it in 1854, while collecting the folk-lore of the Southern Alaskan tribes, from whom I had it in connection with their legend of the Heen Clane or flood (*heen*, water, *clane*, great). It is as follows: After the few people who were saved got settled on the low lands extending from the mountain on which they were saved, being so few in number, they felt very lonesome and were much afraid of another flood, and felt sadly the loss of their former companions. In their dilemma, Yehl appeared to them and said he was sorry for them, and it was but natural they should grieve for their friends and relations, so rudely taken from them. The waters only came, he said, when it was their time, consequently there was no help for it, but still he would do all he could for them. In the first place he would give them more company. Each of them, men and women, were to gather together a heap of stones. When all were ready, they were to pick them up and threw them over their heads backwards, which they did, each stone as it touched the ground jumped up a man or woman, as the case might be. I have heard it said that they only picked up the stones as they lay loose about and threw them backwards over their heads with the same effect. This latter account might be more correct than the other; be it so or not, the original small party gained by the new plan of getting companions.

Above it is said that "the waters came when it was their time," meaning, I suppose, that as one law pervades the whole creation, the law of continual change which as a cause always in the end produces an effect, which even the Ne-kilst-luss Yehl (raven) was unable to prevent, however much he wished to.

In this legend of the stone throwing, there is a very striking resemblance to Deucalion of Greek mythology, who, with his wife Pirrha, were the sole survivors of the flood. They, too, were ordered by the gods to pick up stones and throw them backwards, if I remember aright, with the same results.

JAMES DEANS.

## PRESERVATION BY COPPER SALTS.

Two and a half years ago, when engaged in preparing a series of class lectures upon the ancient races of North America, I visited the collection of the Davenport Academy of Science to study some of their specimens.

Among the interesting specimens there, I noticed a series of copper axes or celts, which were noticeable because the metal in its oxidation had given rise to some copper salt, which had soaked into and preserved a fabric in which the implements had been wrapped. The matter was at the time new to me. Since then I have come upon other specimens and references, and I present here a few notes upon the subject.

I find that there have been preserved thus by copper salts—or, if not actually preserved, evidence is given in copper impressions of the former existence of—a variety of animal and vegetable tissues and of a number of different fabrics.

To begin with these Davenport celts: There are a full half dozen in the collection. They are of much the same pattern, regular celt form, broader at the lower or cutting end. They are well shaped and well preserved. Some of them are covered with a green oxide of copper, in which are perfectly impressed the cords and fibres of ancient fabric in which these specimens had been wrapped. More than this, some of the specimens still retained surrounding them the cloth itself with the threads replaced by the copper salt. So perfect are these impressions in the copper, and the fragments of cloth, that the method of weaving and the arrangement of the warp and woof threads can be quite well made out.\* Holmes mentions a “finely preserved bit of cloth recently found fixed to the surface of a copper image from one of the Etowah mounds in Georgia.†

Judge Henderson figures and describes two copper axes almost exactly like those in the Davenport collections.‡ These were also wrapped in a matting of simpler texture than those found in Iowa.

Jewett speaks of some bronze and iron relics found in a Saxon grave near Church Sterndale, England. He says: “Many pieces of hazel stick were found in contact with these relics, which were probably the remains of a basket in which they were placed at the funeral. All the iron shows impressions of

---

\*Holmes. Third Annual Report, Bureau of Eth., p. 132.

†Ibid.

‡Henderson. Smithsonian An. Report, 1882, p. 695.

woven fabrics, three varieties being distinguishable; namely coarse and fine linen and coarse flannel or woolen cloth.”\*

A curious example is shown in a specimen quite recently found in Louisa County, Ia., and now in the Davenport collection. In this case the whole copper celt shows the cloth perfectly preserved around it, and, outside of the cloth, thick, cork-like pieces of bark. The celt was first wrapped in cloth, then enclosed between two pieces of close-fitting bark. It is probable that a string was then tied around this, making a secure bundle.

In Illinois, a copper awl was enclosed in some material, apparently the bark of a tree.†

Copper beads or cylinders of copper or brass often preserve a bit of the cord on which they are strung. Such a case is presented in the famous “Skeleton in Armor.” S. D. Walker says of Florida specimens, “In two cases fragments of string remain in the beads preserved by copper.”‡ Such instances are not rare.

An example of wood preservation is mentioned in Illinois, where a broken skull was found lying on a thin, shingle-like piece of cedar, colored green with copper.¶

Not only woven fabrics and vegetable materials but delicate, animal substances, some of which we could scarcely hope to find evidence of, may be so preserved by copper salts as to give aid in determining the conditions of burial and other matters of interest. Thus Henderson finds evidence of old skill on the part of Illinois tribes in making feather cloth. Speaking of an axe already referred to above, he says:

“It is made of pure copper. On one side the salts of copper have preserved the cloth that lay against it. The warp and the woof are distinctly marked. On the other side of the axe are preserved, in the same manner, feathers over the whole surface. This feather cloth was extensively manufactured by the red Indians of two hundred years ago, but is now to most tribes a lost art. It is difficult to determine whether the threads on this axe are of bark or wool, though they seem to be of the latter.

\* \* The body no doubt was wrapped in a bark mantle, one side of which was covered with feathers in the style in which the Indians of the Mississippi Valley manufactured feather cloth.”§

A very interesting English case is presented by “Shuttle Stone Low.” “Underneath the large stones lay the skeleton of a man in the prime of life and of fine proportions, apparently the sole occupant of the mound, who had been interred while

\*Jewett. *Grave Mounds*, p. 285.

†Walker. *Smithsonian An.*, 1879, p. 410.

‡Adams. *Smithsonian An.*, 1881, p. 561.

¶McAdams. *Smithsonian An.*, 1885, p. 685.

§Henderson, *Smithsonian An.*, 1882, p. 691.

enveloped in a skin of dark red color, the hairy surface of which had left many traces both upon the surrounding earth and upon the patina or verdigris coating; a bronze, axe-shaped celt and dagger were deposited with the skeleton. On the former weapon are also beautifully distinct impressions of fern leaves, handfuls of which, in a compressed and half decayed state, surrounded the bones from head to foot. From the leaves being discernible on one side of the celt only, whilst the other side presents traces of leather alone, it is certain that the leaves were placed first as a couch for the reception of the corpse, with its accompaniments, and after these had been deposited were then further added in quantity sufficient to protect the body from the earth. The position of the weapons with respect to the body is well ascertained, and is further evidenced by the bronze having imparted a vivid tinge of green to the bones when in contact with them.”\*

Yet more remarkable is this English example from the same author:

“In the instance of the dagger at Stanhope, evidence existed of its having been enclosed in a sheath of leather, and this example also presented the curious feature of impressions of maggots, which had probably made their way from the decaying body into the inside of the sheath, between it and the blade, and had there remained. and had then gradually become marked upon the corrugated surface of the bronze.”†

Human hair, skin or bones are often preserved by salts of copper. Thus at East Windsor, Conn., “a female skeleton with a brass comb; the hair was in a state of preservation wherever it came in contact with the comb.”‡ In Illinois, “the bones were very much decayed with the exception of one side of one inferior maxillary. This was well preserved and stained a deep green color.”§ The “Skeleton in Armor” found at Fall River, Mass., “the skull and a few other bones were much decayed, but the upper viscera were entire and the flesh and skin on the hands, arms, one knee and part of the back were in a good state of preservation, though the skin looked as black as if it had been tanned.”§ It will be remembered that this man was buried with a large breastplate of brass and with a belt of thin brass tubes, which by their oxidation doubtless gave rise to this peculiar condition of preservation. In an article by myself in the November number of THE ANTIQUARIAN is mentioned a rather remarkable case. A skeleton was found in a mound in northwestern Iowa. The flesh and skin were all decayed, excepting some around the skull. The dead had been adorned

---

\*Jewett. *Grave Mounds*, p. 24.

†Ibid.

‡Ellsworth. *Smithsonian An.*, 1881, p. 662.

§Moody. *Smithsonian An.*, p. 547.

§Chase. *Smithsonian An.*, 1888, p. 902.

with ear ornaments of copper, which had acted in such a manner as to preserve the ears and the hair in their neighborhood; an interesting but hideous specimen.\* I have tried hard to secure a picture of this specimen for this article, but without success. This is, however, less to be regretted, as I am able to present a picture of a specimen found in New Brunswick. It has been described as follows:

"It is a perfect mummy of an Indian head. The face retains its features and the hair adheres as completely as in life. It was found on a part of the bank of the river Richibenclo. Along with it was found a copper kettle."† I have a bit of skin taken from the forehead. It is completely soaked with copper and is of a bluish-green color.

Many other instances could be cited. I have said enough, however, to show the frequency of preservation by copper and to indicate the range of materials that may be so preserved. There are probably scores of copper implements in the hands of collectors, which might, if carefully examined, give points of interest, as yet unknown, regarding fabrics or modes of burial. Every time a copper implement is unearthed the immediate neighborhood should be searched for some wrapping or preserved substance. Every copper implement should be carefully examined for impressions and the greatest care should be taken in "cleaning" such relics, lest facts of interest or "evidence" of value be destroyed.

FREDERICK STARR, PH. D.

---

\*Starr. *American Antiquarian*, Vol. IX., p. 361.

†Patterson. *Smithsonian An.*, 1881, p. 675.



### THE CHOCTAW ACHAHPIH (CHUNGKEE) GAME.

This ancient game played with a circular stone, six or eight inches in diameter, and poles, became extinct as a general thing among the Choctaws of Mississippi, about seventy years ago, although it was occasionally played by the Six Towns Choctaws of Jasper County, as late as 1842.

Writers of the last century have left us more or less imperfect descriptions of this game, which they call *chungkee*, but it was never known by this name among the Choctaws, who invariably speak of it as *achahpih*, and the stone used in playing the game as *tali chanaha*. "*Kil ittim achahpi*," "Let us play achahpi," one Choctaw would say to another in soliciting him to play the game.

The statement in M. F. Force's "Mound Builders" that *chungkee* is the Choctaw word for this game is altogether erroneous; also his statement that the name of the game is preserved in Mississippi by the name of Chunky river. On the contrary, Chunky river and the old Indian town of Chunky both derived their name from *chunki*, the Choctaw word for bee-martin, perhaps so called from the great numbers of these birds to be found in that region. So much for *chungkee*.

Some ten years ago there lived in Neshoba county an aged Choctaw named Mehubbee, who had often seen the achahpih game played in his youth, and who still had an achahpih stone in his possession. One day in the summer of 1876, this aged Indian prepared an achahpih yard, in an old field on Talasha Creek, and instructed some young Choctaws how to play this almost forgotten game of their forefathers. This was, undoubtedly, the last time this ancient Indian game was ever played in the State of Mississippi. From a recent conversation with one of the players on that occasion, the following facts about the achahpih are here given:

A level piece of ground is selected, and an achahpih yard (ai achahpih) is laid off, being about one hundred feet long and twelve feet wide. The yard is cleared off, tramped hard and made as smooth and level as possible. The achahpih poles were made of small, slender swamp hickory saplings, from which the bark was stripped, and the poles scraped down perfectly smooth and then seasoned over a fire. They were about ten feet long and the size of an ordinary hoe handle. The head or striking end of the pole (noshkobo) was made rounded. Near the head were cut around the pole four parallel notches or grooves. One-fourth of the way down were cut two more notches, and then a single notch around the center of the pole, making seven notches in all. Twelve was the number of the achahpih game, and the play alternated from one end of the yard to the other. Two

men played the game. Taking their stand at one end of the yard, a third man stood between them, whose duty it was to roll the stone towards the other end. The two players, whom we will name Hoentubbee and Tonubbee, held their poles, so to speak, in a pitching position; that is, with one end of the pole resting against the palm and on the upturned fingers of the right hand, which was thrust to the rearward, while the body of the pole rested loosely in the left hand. As soon as the thrower had launched the stone, and it began to roll along the ground towards the other end of the yard, both players darted their poles at it, each endeavoring to strike it with the head. Their object in hitting the stone was, that in so doing, there was a greater probability than otherwise, of the pole of the striker and the stone stopping and lying near each other. As soon as the throw was completed, the distance of the nearest notch or notches on the respective poles was then measured. If, for instance, the four notches on Hoentubbee's pole should lie nearest to the stone, and nearer than any of the notches on Tonubbee's pole, then Hoentubbee counted four for himself. If, however, the single notch around Hoentubbee's pole should be the nearest of all the notches on either of the poles, then Hoentubbee counted one for himself. And if Hoentubbee's two notches should lie nearest of all to the pole, then Hoentubbee counted two of the game for himself. But if the nearest notch or notches on each pole should be exactly the same distance from the stone, then it was a tied game, and both parties tried it over. Sometimes, by extraordinary good fortune, the achahpih player could make the game in three throws, making four each time. If two achahpih players should happen to have no one to throw the stone for them, they then threw it, alternately, for each other. The achahpih play was not unfrequently kept up during the entire day. As usual in all Indian games, there was much betting on the ground, both by players and spectators. My informant considered the achahpih as a very tedious game, and expressed some surprise that his ancestors should have taken any pleasure in such a dull, uninteresting pastime.

An immense amount of labor was unquestionably used by the ancient Choctaws in making their achahpih stones, which were handed down as precious heirlooms from one generation to another. As they began to come into contact with the civilization of the white man, implements of iron, new ideas, habits and industries were introduced. No new achahpih stones were then made to supply the place of those that were lost or destroyed, and in consequence the play gradually passed out of use; and now there are but few living persons whose eyes have looked upon this ancient pastime of the Southern Indians.

H. S. HALBERT.

Crawford, Mississippi.

## THE LEGENDS OF JAMSHED AND QUETZACOATL.\*

Mexico

In the following sketch, the writer has endeavored to exhibit some of the chief points of resemblance between one of the principal legends of the primitive peoples of Mexico and the mythology of the old world. It is not claimed that these parallelisms are in anywise evidence of identity of origin, but that they are merely coincidences, which may readily be accounted for by the tendency of the human mind to ascribe similar phenomena to like causes. The resemblances are so numerous that many students have been led to believe that the nations of Anahuac had an acquaintance not only with the Scriptures, but also with the sacred books of India.

The partisans of a given theory are exceedingly lenient towards any *lacunæ* which may appear in the evidence, which they themselves adduce; and the writings which contain the earliest traditions of a people are generally so difficult of interpretation and so misty that it is not a severe task to make the proofs conform with the theory.

The fact that the coincidences are many is not surprising when we remember that primitive peoples, finding themselves in similar environments and subject to the same phenomena, ascribe them to like causes. At a period when the ideas of mankind were very limited, when their intelligence had scarcely commenced to develop, the causes to which they ascribed these phenomena, must necessarily have been few.

The fact that the Aztec traditions, in point of origin, are much later than their eastern prototypes, is no proof that one sprang from the other. The Mexicans may have reached some degree of material advancement,—though this is exceedingly problematic,—but, on the other hand, their intellectual development was primitive in the extreme; and the statement that the Hindoo, Persian and the Shemitic nations, during the first centuries of Christianity, were mentally far superior to the peoples of Anahuac at the time of their greatest civilization, that is, the period immediately preceding the landing of Cortez, is supported by a comparison of their literatures. The study of comparative mythology is interesting as showing the systematic and parallel unfolding of the human mind in various parts of the world; but

---

\*The writer wishes here to acknowledge his indebtedness to M. H. DeCharency, author of several works on American antiquities, etc.



as proof of identity of origin it is of even less value to the ethnologists than the legends themselves are to the historian.

The reign of Jámshed was the golden age of Persia. He it was who taught mankind the manufacture of arms, silks, linens, and fine brocades. During his rule, which lasted for three centuries, humanity was no longer subject to death. An astute legislator, Jámshed established the social hierarchy, placing the caste of the *Amuzgaran*, or priests and teachers, at the head of the nation. By virtue of the power which he possessed over the *Divs*, or evil spirits, he forced them to knead clay and water for the manufacture of bricks. Firdusi ascribed to him a supernatural gift, by which he was enabled to discover precious metals and separate them from the baser elements. He forced the *Divs* to build him a jewel-encrusted throne which towered to the heavens. Despite the cares of government Jámshed spent fifty-six years of his life traveling in foreign countries. His prosperity and pride finally became so excessive that he ordered his subjects to adore him as a God, and as a consequence fortune forsook him. In order to chastise him, the All Powerful created the Arab chief Zohak, a form of Aji-Dahaka or the terrible serpent of the Mazdeans, or of the Ahi of the Hindus, who eventually obtained possession of the estates of Jámshed and put him to death.

The Almighty, having chastised the unfortunate monarch so severely, could not allow the conduct of his murderer to pass unnoticed; and the punishment which he devised was at once ingenious and terrible. Until that time, mankind had subsisted entirely on vegetables, the destruction of innocent animals being regarded as a crime. Iblis, the personal devil, presented himself in the character of a cook to Zohak, and offered him a dish composed of partridges, which so pleased the monarch that he promised to grant any request the Evil One might make, whereupon the latter asked permission to kiss his patron between the shoulder-blades. The king, mistrusting nothing, readily consented. From the spot, touched by the lips of Iblis, immediately issued two serpents, causing the sovereign the most frightful torment. Repeatedly and vainly he had them cut off; they instantly reappeared. The science of medicine having been exhausted, all to no purpose, the tyrant in accordance with advice which had been given him, decided to offer them human brains as food, which he hoped would either kill them or procure him relief.

Two young women who were to be sacrificed for this purpose, escaped, and reaching the west, gave birth to the progenitors of the nation of Kurdes, of whom the Smith Kavek was the first. It was at this time that Feridún, a prince of the ancient reigning family appeared. His father had perished through the cruelty of the tyrant, and he himself had been saved from destruction only by flight. For a number of years he led a wan-

dering life, but circumstances finally becoming favorable, he raised an army, and assisted by his two brothers, defeated the troops of Zohak and imprisoned him in a cavern in Mount Damavend. Such is the legend, sketched in outline, of Jámshed, the great hero of the Iranians; and of the Shah-Namah, who was at once warrior, civilizer and inventor.

Let us now turn to the new world and see what attributes the imagination of the strange people whom Cortez overthrew, bestowed upon their hero. The first of the Quetzacoas is represented as the discoverer of alimentary plants, and especially of corn. He, too, taught the early inhabitants of Mexico the art of working the metals. Jámshed compelled the *Divs* to make bricks for him; Xelhua, the comrade of Quetzacoatl, built him a huge pyramid composed of the same material. Firdusi, as we have above seen, attributes to Jámshed the faculty of discovering the whereabouts of precious metals concealed in the earth; and the Toltecs, subjects of Quetzacoatl, are said to have had recourse to certain superstitious ceremonies, with the same end in view. The Mexican hero is represented as having left his people on the death of his father, and the long period which he spent in wandering about recalls the journeyings of Jámshed. Unlike the people of the Persian monarch, the subjects of Quetzacoatl are denied the privilege of immortality; they are, however, depicted as having lived surrounded by abundance and luxury. It is highly probable that the immortality accorded the Iranians was merely evidence of the absence or abolition of human sacrifices among them, and the serpents of Zohak, which were fed upon human brains, a symbol of their frequency among the peoples hostile to the Persians. In this circumstance we find a remarkable coincidence between the various legends. The chief motive for the revolt of Huemac against the Prophet of Tollan was the fact that the latter prescribed, under the severest penalties, those abominable practices which occupied such a prominent place in the rival religion.

The resemblance between the two legends is, however, most striking in that part which relates to the last years of the principal actors. The Shah-Namah represents Jámshed as driven from his throne by Zohak, and after many years of obscurity, reappearing on the borders of the China Sea, where he was put to death by the tyrant. In a similar manner, the Toltec monarch, expelled from his capital by Huemac or Tezcatlipoca, betook himself to Chollula, where he reigned supreme for twenty years. Driven from this city by the same enemy, Quetzacoatl refused to defend himself and departed for the shores of the Antilles, that is towards the east.

Chollula was destroyed by the pitiless conqueror, and the Toltec king, having reached the mouth of the Goazocoalco river, succumbed to fatigue and died. While his body was being con-

sumed on a shield, his soul, in the form of a brilliant-plumed quetzal, was seen to fly forth from the midst of the flames and disappear in the heavens. Thus it will be seen that the Aztecs, in common with many of the nations of the old world, regarded the bird as an emblem of life and resurrection.

In the legend preserved by Sahagun, and that recited by Firdusi, there is a striking discrepancy. According to the latter it was Zohak who gave way to his appetites, while in Mexico it was the Prophet of Tollan himself who yielded to the magician and, allowing himself to become intoxicated, wandered away from his country. The several myths differ in some of their minor particulars; according to one of them the monarch neglected his duties and became addicted to drink; he afterwards took the beautiful Quetzalxochitl for his mistress, and had by her a son, Topiltzin, who was at first named Meconetzin (literally, child of the agave). The proclamation of this last as heir to the throne excited a revolution, which shortly resulted in the ruin of the entire monarchy, a catastrophe presaged by the most terrible omens. The king himself was finally slain in battle against the rebels. Shortly after his death the country was overrun by invaders from the north, and the decimated population, powerless to defend themselves, migrated in all directions.

Huemac II., the legitimate successor of Quetzacoatl, begins his reign in magnificence, as did Jámshed, and performs his duties with dignity; but like the Persian monarch he, too, is finally punished for his pride and dies at the hands of the rebels. In still another detail the role assigned Huemac resembles the part played by Zohak. Gourmandizing was primarily the cause of the fall of both heroes. The sin was followed by the same consequences. Zohak fed his serpents with human brains, and Huemac suffered the immolation of captives on the altars of the gods. Here we again discover a dim recollection of the struggle between the two rival sects, one of which prescribed the human sacrifices required by the other. Finally the adultery of Huemac with the beautiful Quetzalxochitl, the part which her sister, the Princess Quetzalpetlalt, took in his orgies, and the precipitous marriage of his daughter with the plebeian Tohueyo, find their counterparts in the rape of the two daughters of Jámshed committed by Zohak.

Quetzacoatl being the principal demi-god of the Mexican mythology, it is not surprising that he should have been conceded the honor of the various exploits of the other heroes that lingered in the Aztec mind. The circumstances attending his birth are in many respects similar to those which are related of Bacchus. The latter after the death of his mother, which occurred while she was *enceinte*, was placed in the thigh of Jupiter, whence he issued on the expiration of the normal period of gestation. Chimalnan, the spouse of Nonohualcatl, died in giving

birth to Quetzacoatl, whereupon he was confided to the care of an aunt, and he was therefore spoken of as having had two mothers. The symbolism in the religious character assigned to the two heroes, is the same. In addition to this the similarity between Chimalnan, mother of Quetzacoatl, and Semele, mother of Bacchus, is not only strikingly illustrated by their history, but also by their names. Chimalnan means "mother of the shield," and, although this does not recall in any manner the signification of the name Semele, it is an appellation of a national heroine, which is thoroughly Oriental or Greek in character. The likeness is manifested still more plainly in the attributes of the two Gods, Bacchus is especially regarded as the personification of warmth and moisture. He afterwards became to be honored as the cause of germination and of the production of fruits; and at Sparta he was adored under the name of Ouritns, or discoverer of the fig; it is extremely likely that his character, as god of the vine and carousal, which we attribute to him, is merely a development of the primitive idea.

In Quetzacoatl we distinguish the legendary hero and likewise an emblem of the migrations and civilization of the Toltecs. He had, as we have seen, the character of a god of agriculture, for the Codex Chimalpopoca represents him as going to seek corn on Mount Tonacatepetl.

Let us now compare the American legend with the biblical account of Noah. The memory of Quetzacoatl is closely associated with a flood. A terrible inundation followed the landing of the Nahuans hero upon the shores of the lagoon of Tuminos; of the twenty chiefs who accompanied him, thirteen perished in the waves. The seven who escaped sought refuge in the mountain caves; and according to Sahagun, the Nahuans who peopled New Spain came from Seven Grottos, where they had found refuge, as the sole survivors had done in the ark during the deluge. The Nahuans chief resembles Noah in another respect. The son of Lamech, whom the Bible represents as an agriculturist, was the inventor of the art of making wine; while one of the Quetzacoas was the first to extract the juice of the agave. The curse of Shem finds its counterpart in the expatriation of Cuextecatli, a sectarian of Texcatlipoca, who allowed himself to become intoxicated at a banquet given by his people, and was in consequence compelled to flee from his country.

The personages of Imos and Quetzacoatl, although primitively distinct, seem to have been confounded at a later period in the American mind. The memory of the deluge is intimately connected with that of Manu, originally identified with Yama, the latter being the prototype of the Tzendale Imos. The same observation applies to Adam, to Noah and to the Persian Yima. He it was who raised the famous scaffold which played in the traditions of Zoroaster, a part similar to that of Noah's ark

among the Hebrews. The tower of Babel is represented by the pyramid of Chollulan which was destroyed by the incensed gods when but partially built.

In the Râmâyana an account is given of a horrible drought suffered by the kingdom of Angas, in punishment of a sin committed by its monarch Laumapâda. There was but one way to overcome the scourge; it consisted in finding a young ascetic of great virtue, named Rishyaçringa, upon whose arrival in the capital of Angas, the prophecy announced an abundance of rain would fall. The execution of this plan was difficult, however, for they feared the anger of Rishi, the young man's father, whereupon the following expedient was adopted: The most beautiful of the Bayaderes, bearing odorous shrubs and fruits, set out to find him. In order to avoid Vibhandâka, as Rishi was also called, they journeyed through the forests, and when he had left his abode to perform his penances, they presented themselves before his son, upon whom they lavished all their artifices to allure him from his home. When his father returned, Rishyaçringa related to him what had happened. The young ascetic was warned to be on his guard, but nevertheless the Bayaderes were successful and finally led him away to the capital of the kingdom of Angas. As soon as he entered the city an abundance of rain fell, and the old priest, believing it to be the will of the gods, forgot his anger; and as a reward, Laumapâda gave Cansa, the daughter of Daçaratha, to Rishyaçringa in marriage. Later the young man betook himself to the court of Daçaratha, king of Ayaudhyâ, the glory and grandeur of whom Vâlmiki sings; he was, the poet says, "like unto the fourteen gods and well versed in the Vedas;" his subjects lived a life of abundance and ease. He was, however, without sons, and on the advice of Soumantra, the wisest of his counselors, he sent for Rishyaçringa, who presented offerings to the gods, thereby inducing them to grant Daçaratha's wishes and send him a male child.

This legend is found almost word for word in the Codex Chimalpopoca. In punishment of the pride of Huemac II., the Toltec empire suffered a draught and famine; at the end of the fourth year a little rain fell, inspiring the people with hope; it was, however, followed by a frost which destroyed all vegetation, even the agave, which on the table lands of Anahuac resists the most severe cold. A *macehual*, or "man of the people," who was wandering about the borders of the lagoon of Chapultepec, came upon an exhausted fountain near the king's palace, where he laid himself down and fell asleep. Towards the middle of the night he was awakened by a strange sound, which gradually increased in volume. The noise was caused by a small stream of water, clear as crystal, flowing from a rock. The pilgrim knew that his prayers had been answered and that the draught was at an end. And he threw himself on the ground and worshipped

Tlaloc, God of the waters and fecundity; after a short time, raising his head, he beheld the Tlalocs, the spirits who accompany the god of the liquid element, approaching him. They advanced in files, plucking ears of tender corn which sprang up from beneath their feet. One of the Tlalocs offered the *macehual* an ear of corn, and then giving him an entire stalk ordered him to carry it to Huemac. Thereupon the heavens became cloudy and a terrible storm, which announced the return of plenty and the end of the misfortunes of the empire, burst upon the country. As soon as Huemac saw the pious *macehual* he repented of his sins and resigned the supreme power to his son Acxiti Topiltzin.

It is evident that this legend was formed by the partisans of Tezcatlipoca, desirous of representing the fall of the Toltec empire as due to the sins committed by the followers of Quetzacoatl, but the similarity with the legend of the east on that account is none the less striking. The resemblance is manifest even in the most trivial details. In both legends there is a draught sent by the gods as punishment for the sins of the sovereign. It ceases, thanks to the intervention of a person of great piety, but of obscure parentage. The Bayaderes present Rishyaçringa confections in the form of fruits, while the Tlalocs offer the *macehual* ears of corn. Immediately after the visit of the ascetic, a male child is born to Daçaratha, while upon the arrival of the envoy of the Tlalocs, the monarch of Anahuac abdicates in favor of his son.

JOHN LESLIE GARNER.

Part. 48.

## THE CROSS IN AMERICA.

Among the many surprises which the conquerors of Mexico experienced, the greatest was when they discovered the cross in the midst of the heathen temples of this far-off land. Their first explanation was that St. Thomas the Apostle, who was reputed to have been a missionary to India, had also made his way to America, to here introduce the Christian symbol. As they continued to notice it and learned of the human sacrifices which were offered and other cruelties which were practiced, they concluded that it was the work of the devil; that he had taken this symbol of peace and had made it sanction the most cruel atrocities, and thus had deluded the people and led them to their own destruction. We do not wonder at the indignation of the priests when they discovered this symbol associated with so cruel practices, for they were ignorant of the real history of the cross. The cross is a pre-Christian symbol, and had existed in Asia long before the history of Europe began. It was an instrument of punishment in the days of Christ, and it was only because so innocent and holy a being as our Savior was crucified upon it that it became sacred to Europeans. Were we to look upon it as it existed in Asia before the days of Christ and as it existed in America before the time of the discovery, we should better understand it as a symbol. We shall in this paper consider it in that light. We shall endeavor to disassociate it from pre-conceived ideas and to place it before ourselves as any common symbol, having no more sacredness in our eyes than the earth circles, the stone relics, the Mexican pyramids, but an object of study like them. We must acknowledge its prevalence throughout the continent, and shall probably be led to the conclusion that it was a symbol of nature worship, very much as the circle, the crescent, the square and other figures were.

The cross as a sun symbol or weather symbol is the subject of this paper. We are to show that it was so used. It was one of the symbols of sun worship.

I. Our first point is, the cross was used by the aboriginal tribes as a sun symbol. These tribes were in the habit of using symbols to express astronomical facts; they in fact had symbols which were so extensive and were so similar that they could be understood by the different tribes. Their symbolic and sign language corresponded in this respect; both were

mediums of communication between the tribes, even when the language was a barrier. The symbolism differed, however, from the sign language, in that it had to do mainly with religious thoughts and with mythologic ideas; while the sign language dealt with the common affairs of life. There was a common mythology among all the tribes, at least a common astronomy and for this reason the symbols were easily understood. The study of the sign language has revealed this, and the familiarity with their mythology is bringing the fact out more and more. The means by which this symbolism has become known are varied. Certain books, such as the *Walum Olum*, contain cer-

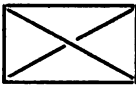


Fig. 1.



Fig. 2.



Fig. 3.

tain symbols; the pictured records, such as the Dakota calendar, contain others; the various pictographs which have been preserved contain still other symbols; the rock inscriptions contain others. On these the cross is occasionally seen, though the circle and the crescent are more common. In these various records the circle was the symbol of the sun, the cross was the symbol of the winds, the square was the symbol of the four quarters of the sky, and the crescent the symbol of the moon. The following are a few of the symbolic figures common among the wild Indians. In the *Walum Olum* of the Delawares we find the extended land and sky symbolized by a square with diagonal lines, which resemble an ordinary envelope, with circles to signify the sun and moon and stars in the separate divisions. See Fig. 1. The earth was symbolized by a dome or hemisphere;



Fig. 4.

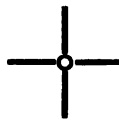


Fig. 5.



Fig. 6.

sometimes the dome was surmounted by a crescent, to symbolize the moon as ruling over the earth. See Figs. 2 and 3.

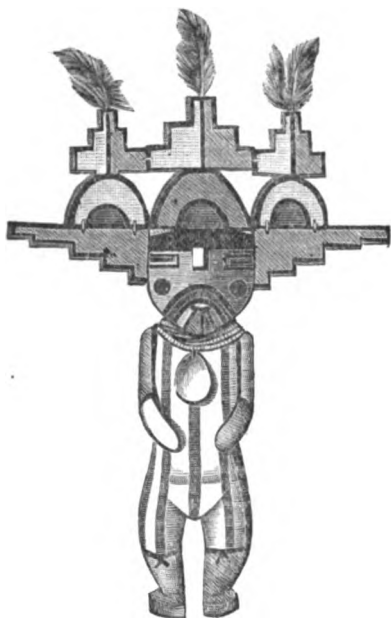
The points of the compass were symbolized by a cross with straight bars. Fig. 4. The winds with arrows placed at right angles to the ends of the bars, to signify the direction of the winds.\* The Moquis have signs of the sun which consists of circles with rays shooting out from them, the circles having either faces or eyes and mouth on the inside. Fig. 5 and 6. Mr. C. K. Gilbert has given figures taken from rock etchings in Arizona, in which the face of the sun is placed at the intersection of the

\*See Brinton's "The Lenape and their Legends," p. 182.



bars of the cross. These symbolized the four quarters of the sky, with the sun in the zenith. Circles similarly placed at the intersection of the cross-bars, but without dots in the center, symbolized the stars.

Morning and sunrise were symbolized by the Moquis by a dome, with a face in the dome and lines or rays streaming out from the dome. In the Ojibwa pictograph, as reported by Schoolcraft, the sky was symbolized by a simple arc composed of two curved lines, but in the Moqui etchings it was symbolized by two curved lines or by a curved line with a turretted figure



*Fig. 7—Zuni Head Dress.*

above the line. Rain was symbolized by lines drawn below the curves or arcs, to signify the drops as falling from the clouds. Lightnings were signified by a crooked line emanating from the arcs or by a crooked line surmounted by a turretted figure.\* Among the Zunis there are statuettes which probably were designed to represent the same facts. See Fig. 7. In these the image probably represented the sun divinity. On the head of the man was a turretted head-dress representing the nature powers, with arcs to represent the sky, turrets to represent the lightnings, and feathers above the turrets to represent the clouds, and projections at the side to represent the winds or the points of the compass. We do not discover in these the symbol of the cross, and yet the same nature powers were represented, but with different symbolic figures.† The turretted figures may, however, signify the houses of the sky and the habitations of the divinities of the sky. At least we have in these, imitations of the terraced houses of the Pueblos.

II. Our next point is that the cross is a common object in pictographs and rock descriptions. There are many inscribed rocks which contain figures of the cross. In some of these the cross is associated with the circle and in some, though rarely, with animal and bird figures.

\*See Mallory's Sign Language, Vol. I., Bureau of Ethnology, p. 371.

†See Second Annual Report, p. 385. Zunis and Wolpis.

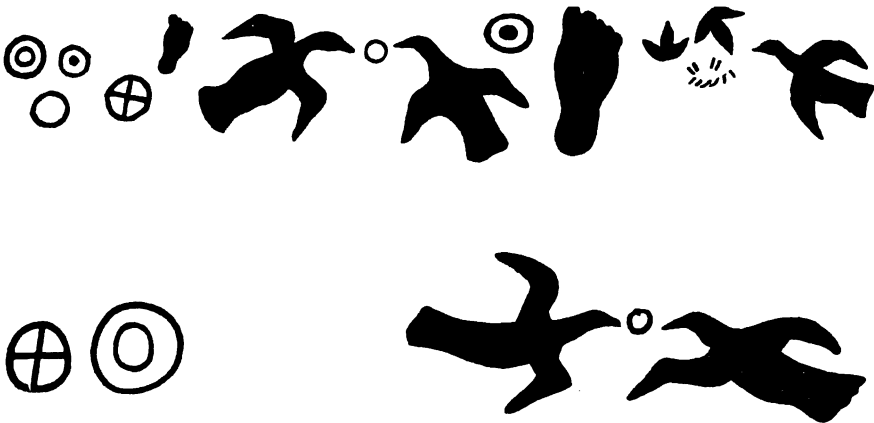
We give here a few cuts to illustrate this point. Mr. William McAdams has described the figures which he discovered on the bluffs at Alton, Ill., and caves at St. Genevieve, Mo., and has kindly loaned us the cuts. The following is his description :

"Some three or four miles above the city (of Alton), high up beneath the over-hanging cliff, which forms a sort of cave shelter, on the smooth face of a thick ledge of rock, is a series of paint-



*Fig. 8.—Rock Inscriptions in Illinois.*

ings, twelve in number." They are painted or stained in the rock with a reddish-brown pigment which seems to defy the tooth of time. It may be said, however, that their position is so sheltered that they remain almost perfectly dry. Their appearance denotes great age. They doubtless have been there for centuries. \* \* "Half the figures of the group are circles of various kinds, probably each having a different meaning." See Fig. 8. "On the left are two large birds apparently having a combat; to the right of the birds is a large circle enclosing a globe, and before this is the representation of the human form,



*Fig. 9.—Rock Inscriptions in Missouri.*

with bowed head and inclined body, as if in the act of offering to the great circle something triangular in shape, not unlike a basket with a handle. Among all the ancient pictographs seen this is the only one where the human form is depicted as if in adoration to the sun. \* \* Counting from the left, the eighth figure seems to represent some carnivorous animal with a long tail. The next figure of the series is a large bird with extended wings, which seem to come from the base of the neck. This

curious winged creature seems to be having a combat with a circle with two horns, at some little distance there follows the representation of an owl, the whole ending with a small red circle. \* \* There is another very interesting group of pictographs to be seen in a small cavern on the banks of the Saline river, near where it empties into the Mississippi. The figures are eighteen in number, and are carved or cut in the smooth face of the limestone walls. See Fig. 9. There are two lines of the series, one on each wall of the cave. The relative position of the figures on the wall is shown in the cut. The size of the figures may be inferred from the representation of the human foot in the upper line: this measures 14 inches from the extremity of the great toe to the heel." \* \* The following are Mr. McAdams observations: "These circular figures are not uncommon among the pictographs of the Mississippi and are of great interest, more especially those having the cross enclosed. The illustrations of the human footprints with those of birds and other creatures are found in many places. The representation of birds, however, as if in combat over a circle or planet is more rare, and we are not aware that it has been found except along the banks of the Mississippi, where it occurs a number of times, \* \* It will be remembered that somewhat similar figures are shown in the pictographs on the bluffs above Alton; the same figure is repeatedly shown on both sides of the cave (at this place). Along the Illinois river, some twenty-five or thirty miles from its mouth, is another cave situated in a limestone bluff, in which is another series of carvings. \* \* The figures are nineteen in number; three of them representations of the human foot; seven of them bird-tracks; nine of them circles with dots or rings in the center."\*

Mr. McAdams speaks of the mounds; a number of them were on the bluff above the pictograph at Alton, many of them near the salt springs on the Saline river, and others near the carved rock on the Illinois river. He gives a cut of a cave in a limestone cliff at Grafton, Ill., above which is a mound and a circle inscribed on the cliff between the mound and the mouth of the cave.

Mr. McAdams has called attention to certain water vases now in possession of the St. Louis Academy of Science, on which are painted various ornamental figures. These figures are composed of circles with spots, circles with crosses, circles with pointed rays, and are supposed to be sun symbols as well as ornaments, and he makes the important remark that the figure of the circle with serrated edge is not an uncommon one among the pictographs. This comparison between the pottery ornamentation and the rock inscription is an important one, and

---

\*See Records of Ancient Races, McAdams, pp. 22, 25 and 28.

we quote Mr. McAdams because of his opportunity in studying the inscriptions. His extensive collection of Mound-builders' pottery enables him to speak somewhat authoritatively on the subject of ornamentation. Of the crosses found in the pottery he says: "The peculiar cross with the curved arms in the center, is a very common one on the pottery from Illinois, Missouri and Arkansas, and some of the most beautiful burial vases are decorated with it in some form." He says, "It is very interesting to learn that figures very much like these are among the oldest of symbolic forms known. We have taken scores of burial vases from the mounds of Illinois, almost exactly duplicating the most peculiar shapes of many from Egypt." He then gives a cut of a vase from a tomb at Thebes, in Egypt. The comparison is not a very close one and yet it is suggestive. For we find the circle and the spots on both vases. A better illustration is the one which is given by the same author, by which the analogy between the suastika of the East and the bent cross in these pottery ornamentations is brought out. Of this, however, we shall speak hereafter. From this point to the Gulf of Mexico, and from there to the Isthmus of Panama it was the prevailing cult. The fact, however, that in this same region there were monstrous animals depicted upon the rocks, and that these animals represented the mythological creatures which were worshipped by the so-called animal tribes, would indicate that it was the border line, and that sun worship and animal worship met at this point.

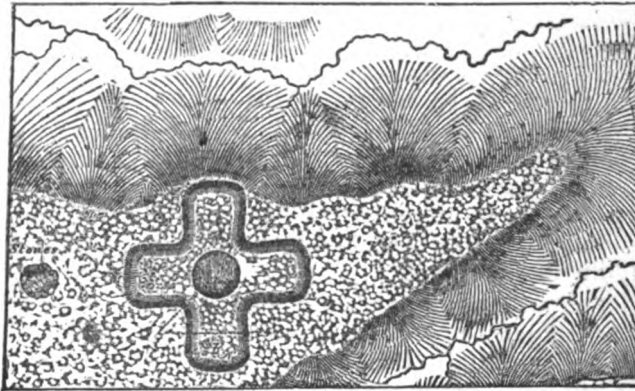
III. The cross as a symbol among the mounds will next engage our attention. We have already spoken of the circle and the cross contained in the earthwork near Portsmouth, Ohio; these were evidently symbolic of sun worship. Squier and Davis have spoken of this. "It consists of four concentric circles placed at irregular intervals with respect to each other, and cut at right angles by four broad avenues which conform in bearing, very nearly to the cardinal points. A large mound is placed in the center; it is truncated and terraced, and has a graded way leading to its summit." On the supposition that this work was in some way connected with religious rites, this mound must have furnished a most conspicuous place for their observance and celebration.\*

There is another structure which shows that the Mound-builders were familiar with the figure of the cross and that they embodied it in their earth-works. It has been described by Squier and Davis in their "Ancient Monuments". The work here figured is found near the little town of Tarlton, Pickaway county, Ohio, in the narrow valley of "Salt Creek," a tributary of the Scioto river, eighteen miles northeast from Chillicothe, on

---

\*See *Ancient Monuments*, p. 81.

the great road to Zanesville. See Fig. 10. In position it corresponds generally with the remarkable work last described though wholly unlike it in form. It occupies a narrow spur of land at a prominent point of the valley; its form is that of a Greek cross, ninety feet between the ends, and elevated three feet above the adjacent surface. It is surrounded by a slight ditch, corresponding to the outline of the elevation; in the center is a circular depression, twenty feet across and twenty inches deep. The sides of the cross correspond very nearly with the cardinal points. Immediately back of it is a small circular elevation of stone and earth, resembling that in connection with the Granville effigy and denominated an altar in the description of that work. Several small mounds occur near by; and upon the high hill, a spur of which is occupied by the cross, are several large mounds."\*



*Fig. 10—Cross in Pickaway County, Ohio.*

IV. The relics which exhibit the symbols of sun worship will next engage our attention. There are many such in all parts of the country. We shall at present speak of those which are found only among the mounds. Mound-builders' relics may be divided, according to the material of which they are composed, into several classes. First, the inscribed shells; second, the ornamented pottery; third, the carved stone specimens. We shall dwell mainly upon the shell gorgets or inscribed shells.

(1) First among these are the shell gorgets which contain circles. Descriptions of these have been given by various authors, but all agree in making the figures upon them symbols of the sun. The figures represent a single dotted circle in the center, around which are placed three crescent-shaped figures arranged in the form of a wheel; outside of these are several dotted circles arranged in a band, which surrounds the

\*See *Ancient Monuments*, page 98.

crescent wheel, the number of the circles varying from four to six. Outside of these is still another band, which is filled with dotted circles, varying in number from twelve to fifteen. Scattered over the whole field there are small dots which have been punctured into the shell. Here then we have a complicated sun symbol. A central sun, three moons, which are supposed to rule the year; next, the suns, which represent the seasons or the divisions of the year; next, the suns or circles, which represent the months or divisions of the seasons; next, the stars or dots, which possibly represent days. We are reminded by these gorgets of the sun circles of Mexico, which always have the sun symbol in the center and the symbols for the season arranged in circle around the center. How it should happen that these rude shell gorgets should have symbols so similar to the circles and



Fig. 11.—Bird Gorget.

symbols on the highly ornamented calendar stones of Mexico is a mystery. The fact gives rise to many conjectures. (a) Either the Mound-builders were a degenerate race from the same stock, or (b) they borrowed ideas from the Mexicans and embodied them in this rude way on shells, or (c) there was a transmission of thought from a primitive time when all were together; the Mexicans having added to the simple rudiments all the elaborate and complicated symbols which have grown up with their increased culture and civilization. There is one lesson to be learned from the analogy. Sun worship existed in different stages throughout the country. The symbols on the gorgets marks the lowest stage, while those on the calendar stone marks one of the higher stages.

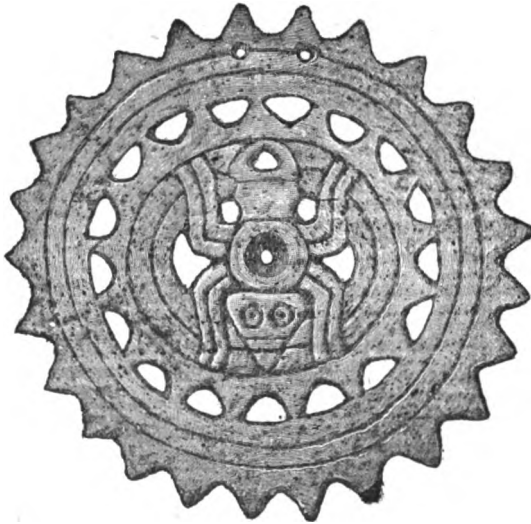
(2) The shells which contain quadrangular figures and birds'

heads. These we place among the sun symbols, for we can explain them in no other way. Mr. W. H. Holmes has described these. See Fig. 11. The following is the description: "In the center is a nearly symmetrical cross of the Greek type, enclosed in a circle; outside of the circle are eight star-like rays, ornamented with transversal lines, the whole representing a remarkable combination of the two symbols, the cross and the sun. Surrounding this symbol is another of a somewhat mysterious nature. A square frame-work of four continuous parallel lines looped at the corner, the inner line touching the tips of the star-like rays. Outside of this are the four symbolic birds, placed against the side of the square opposite the arms of the cross. These birds' heads are carefully drawn. The mouth is open, the mandibles are long, the eyes represented by a circle, and a crest springs from the back of the head and neck. The bird resembles the ivory-billed woodpecker more than any other species."

These gorgets are evidently sun symbols, the rays of the sun being indicated by the points and the beams by the radiating lines. The cross in the center of the circle may be intended as a weather symbol, either indicating the points of the compass or the four quarters of the sky. The quadrangular figure may have reference to the same fact, or possibly may symbolize the four seasons of the year. The birds' heads may also have reference to the nature powers, a substitute for the thunder bird. Six of these shell gorgets were discovered among the mounds mainly in Tennessee and Georgia. They have been ascribed to the Cherokees, though they may have belonged to the Natchez. The Natchez were sun worshippers and possessed an elaborate symbolism. There is no doubt but that the Mound-builders of this region were sun worshippers, and these symbols would indicate that they had a mythology resembling that of the Zunis and other tribes among which sun worship prevailed. The Zunis divided the sky into four parts, and made an animal divinity to preside over each one of the parts. The astronomy of the Mound-builders is unknown, but these are undoubtedly astronomical symbols.

(3) The spider gorget. A very interesting series of shell gorgets is the one which contains images of the spider. Several of these are in the possession of the Academy of Science of St. Louis, Mo.; they have been described by Mr. W. H. Holmes. He says: "The spider occurs but rarely in aboriginal American art. Occasionally it seems to have reached the dignity of religious consideration, and to have been adopted as a totemic device. Four examples have come to my notice: two from Illinois, one from Missouri and one from Tennessee. The spider is drawn with considerable fidelity to nature. It covers nearly the entire disk, legs, mandibles and abdomen reaching to the outer marginal line. The thorax is placed in the centre of the disk, and is rep-

resented by a circle. Within this a cross has been engraved, and on one specimen the ends of the cross have been enlarged, producing a form much used in heraldry, but one very rarely met with in aboriginal American art. The head is heart-shaped, is armed with mandibles, the latter being ornamented with a zigzag line. The eyes are represented by small circles with central dots; the legs are correctly placed in four pairs upon the thorax; the abdomen is heart-shaped and is ornamented with a number of lines and dots, which represent the natural markings of the spider. In reference to the cross, it has been suggested that it may have been derived from the markings upon the backs of some species. The cross here shown has, however, a very



*Fig. 12—Spider Gorget.*

highly conventionalized character, and what is still more decisive it is still more identical with figures found upon other objects. The conclusion is here as elsewhere that the cross has a purely symbolic character.”\*

The spider gorget was evidently symbolic. It contains all of the symbols which were commonly used in the astronomy of the sun worshippers. The circle will first be noticed.

The body of the spider, and in fact the whole disk of the shell, is covered with circles. There are circles upon the head of the spider; there are circles enclosing the spider; also a circle in the center of the spider upon the body; in one case there are circles enclosing the spider, two circles surrounding the rim of

\*See Figs. 2, 3 and 4, Plate lx1, Second Annual Report, Bureau of Ethnology, p. 288



the gorget, a scalloped circle making the edge of the gorget, and perforations dividing the circles from one another within the gorget. These were evidently symbolic of the sun.



*Fig. 13—Spider with Cross.*

in the shape of the Greek tau on the abdomen of the spider. See above. The question arises how came the Mound-builders by these symbols; is it a mere coincidence, or was there a transmitted symbolism?

The spider was a water divinity among the Zunis. We can trace the symbol so far, but we go no farther. It is possible that the creature was used to represent the sun divinity. In that case we should say that the different parts represented the different parts of the sky, the four legs symbolizing the four quarters, the head and abdomen the upper

The cross is, however, the most remarkable feature of these spider gorgets. It is, to be sure, varied in shape, but is evidently a symbol. The peculiarities of the cross are to be noticed. In one it is a common plain cross enclosed in other circle, see Fig. 13; in another the cross is in the form of the suastika or fire-generator of the east, its arms are bent, see Fig. 14; in another there is a cross in the center on the body of the spider and two peculiar crosses



*Fig. 14—Spider Gorget.*

and nether regions, the body the central sun, the cross on the body the points of the compass, the bars and rings on the abdomen the seasons, the zigzag lines on the mandibles the lightning, the

tau some one of the nature powers. This may be a mere conjecture, and yet the figure is very suggestive. It would seem from this as if the Mound-builders were familiar with these astronomical facts, and that they were able to symbolize them in this way. The symbolism of the Zunis has been studied and some remarkable points brought out. The mythologies of the Indians would indicate that a similar symbolism might have prevailed among them or their ancestors. We do not know where this mythology came from, whether it was transmitted from the east or whether it grew up on American soil, yet the myth of the "four brothers," who represented the four winds and the four points of the compass, was a very common one.

(4.) The serpent symbol is to be mentioned in this connection. We have already spoken of this. See Fig. 15. Thirty

or forty specimens of gorgets engraved with the serpent symbol have been found. The great uniformity of the design is a matter of much surprise.

(a) The engravings are always placed upon the concave side of the disk. (b) The serpent is always coiled, the head occupying the center of the disk. (c) The head is so placed that when the gorget is suspended it has an erect position, the mouth opening toward the right hand. (d) The eye of the serpent is always near the center of the figure and surrounded by a varying number of circles. (e) The mouth of the serpent is

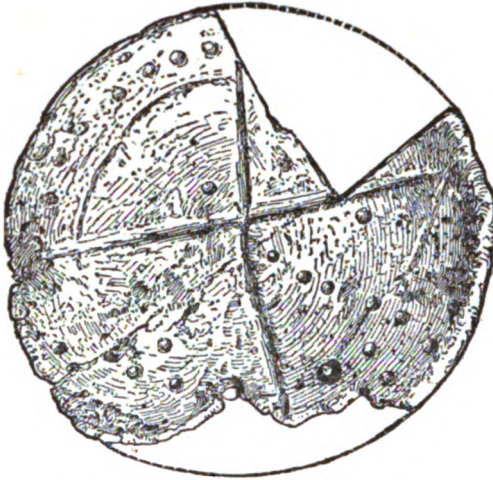


Fig. 15—Serpent Gorget.

sometimes represented in profile, and sometimes as if projecting forward, the nose and mouth being visible. (f) In most of the specimens there are joints in the body of the serpent, the joints being represented by a number of circles with a dot in the center. In a few cases the serpent seems to have legs, though the marks which resemble legs may be intended for the joints of the body. (g) Every one is represented with rattles.

(5) We come now to a very interesting series of gorgets, namely those which contain the figure of the cross without any other symbol. It seems singular that this figure should be found as a separate symbol among the mounds, but so it is. Mr. W. H. Holmes speaks of this fact. He says: "It should not be forgotten that the cross was undoubtedly used as a symbol by the prehistoric nations of the nations of the south and consequently

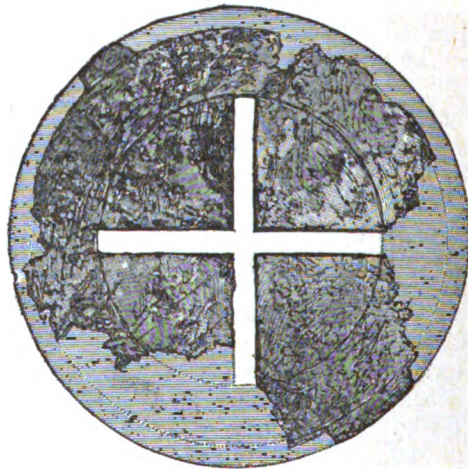
that it was probably also known in the north. A great majority of the relics associated with it in ancient mounds and various places are undoubtedly aboriginal. We find at rare intervals



*Fig. 16—Cross on Shell Gorget.*

designs that are characteristically foreign; these whether Mexican or European are objects of special interest, and merit the closest examination. That the design under consideration as well as any other engraved upon these tablets is symbolic or otherwise significant I do not for a moment doubt; but the probabilities as to

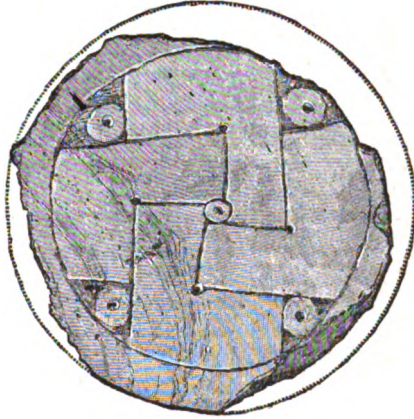
the European or American origin of the symbol of the cross found in this region are pretty evenly balanced." He, however, says: "I have not seen a single example of engraving upon shell that suggested a foreign hand or a design, with the exception of this one, that could claim a European derivation. Some very ingenious theories have been elaborated in attempting to account for the presence of the cross among American symbols." Brinton believes that the great importance attached to the points of the compass, the four



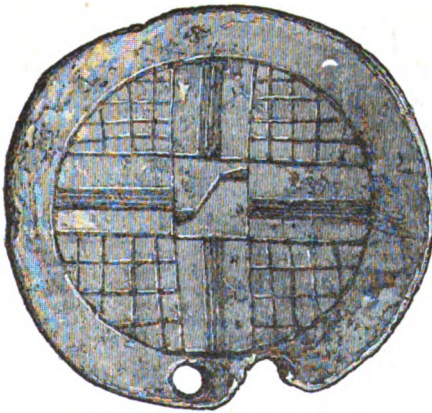
*Fig. 17—Cross on Copper Disk.*

quarters of the heavens, by savage peoples has given rise to this symbol of the cross. With others the cross is a phallic symbol, derived by some obscure process of evolution from the veneration accorded to the reciprocal principal in nature. It is, how-

ever, frequently associated with sun worship and is recognized as a symbol of the sun. Such delineations of the cross as we find embodied in ancient aboriginal art represent only the final stages of its evolution (degeneration?) and it is not to be expected that its origin can be traced through them. In one instance a direct derivation from nature is suggested. "The ancient Mexican pictographic manuscripts abound in representations of trees, conventionalized in such a manner as to resemble crosses." By comparison of these curious trees with the remarkable cross in the Palenque Tablet, I have been led to the belief that they must have a common significance and origin. The analogies are indeed remarkable. The branches of these cross-shaped trees terminate in clusters of symbolic fruit, and the arms of the cross are loaded down with symbols, which, although highly conventionalized, have not yet entirely lost their vegetable character.



*Fig. 18—Suastika on Shell.*



*Fig. 19—Cross on Shell.*

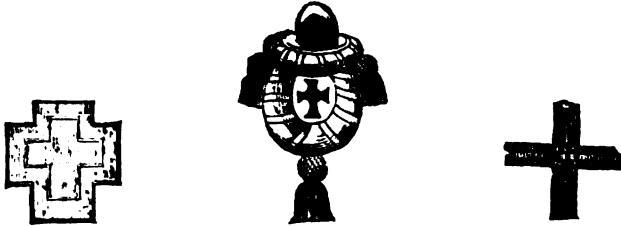
The most remarkable feature, however, is that these crosses perform like functions in giving support to a symbolic bird, which is perched upon the summit. This bird appears to be the important feature of the group, and to it, or the deity which it represents, the homage is offered.

We turn now to the shell gorgets. It will be noticed that a great variety of crosses are contained in these. Figs. 16, 17, 18,

and 19. Some of them are very rude, consisting of mere cross lines with an attempt at circles and dots; some of them have cross-bars, the bars being cut out in such a way as to bring out the shape of the cross. This particular specimen given in the cut (Fig. 17) is a piece of copper and not shell;

others consist of cross-bars with several parallel lines traversing the bars, the space between the bars being filled with cross hatchings; still others containing figures of the cross, with the bars bent at right angles, forming a sort of wheel around a central point. These gorgets were all taken from mounds in Tennessee. They show that a great variety of symbolism prevailed there. We call attention to the different peculiarities of the cross. There are fifteen different figures of the cross. All but three of them are contained within circles. The crosses are nearly all of the same kind, namely the Greek cross. Only two variations from this is apparent, namely the cross with the arms bent at right angles and the cross with the arms in the shape of scrolls. See Plate I.

The cross has about the same shape, whether found in the spider gorgets, the bird gorgets, or on a gorget by itself. The most important point is that the cross of America is the Greek cross, occasionally, in the shape of St. Andrew's cross. The one which the missionaries or Spanish explorers carried with them was the Roman cross. If the symbol was borrowed by the Mound-builders from the whites it would have been in the shape of a Roman rather than a Greek cross. Fig. 20. There



*Fig. 20—Shape of the Crosses Found in American Ornamentation.*

are a few Roman crosses found in the mounds, but they are always exceptional. Two figures are to be seen on the plate, one of them having a single bar and another a double bar across the upright; these resemble Roman crosses, and may have imitated the silver "catechumen crosses" which were so common. These relics, however, are modern. The crosses with the curved or bent arms are especially worthy of notice. These have been called Phœnician. They resemble the figures which are common in the east, and are distributed throughout the whole continent of Asia. They are found in the ancient ruins of Troy and in the modern symbols of Hindostan. They are regarded as fire-generators, but are also symbols of the nature powers. There is one peculiarity about these bent crosses in America; they all turn to the left. In oriental countries the suastika is generally bent to the right, though in a few cases to the left. How this particular symbol could have reached America and been buried so deeply in the mounds is a mystery. It must have been introduced before the times of history, for it is not a form which is

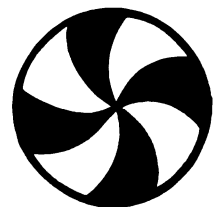
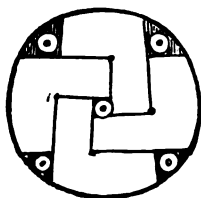
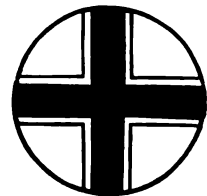
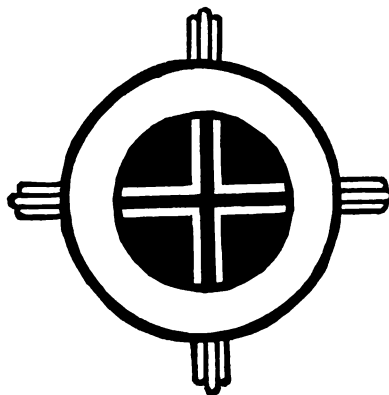
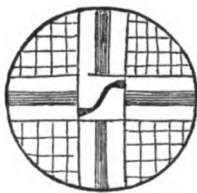
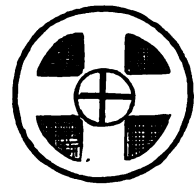
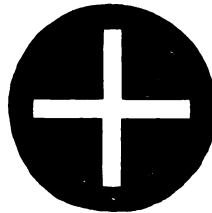
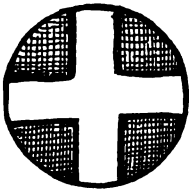
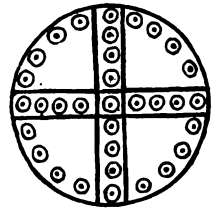
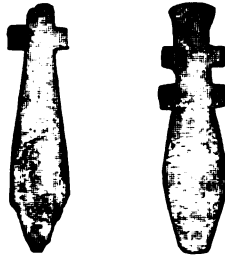
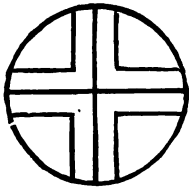
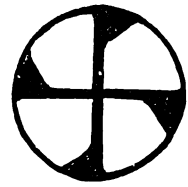
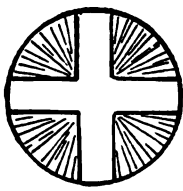


Plate I.—Different Crosses Found on the Shell Gorgets.



commonly used by the historic peoples. The Mound-builders must have borrowed it from some other than the white people. It is probably a pre-Christian symbol, having been introduced into America in prehistoric times.

That the cross contained in the relics was a prehistoric symbol is evident from the use and repetition of the number four. It will be noticed that there are on all the gorgets, and especially those containing the cross. If we take the regular figure there are four bars and four spaces, and four lines on the bars, and four perforations between the bars. In the figure where there are so many dotted circles there are four suns in the spaces and on each of the arms; and in the figure where there is a large circle there are four projections beyond the circle. In the figure where the cross has bent arms there is a dotted circle in the center, but four perforations at the angles and four circles in the spaces. So if we take the spider gorgets we find the spider contained within four circles, and that it has upon its abdomen four bands, and in one case a figure resembling the Greek tau, which was a common symbol in Mexico but is strangely out of place here. See Plate I.

In the bird gorget the number four is repeated. There are four sides to the quadrangle and four loops, formed by four lines. There are four bird's heads with four stripes in the neck, and four lines or bars in the crest. There are four spaces in the center of the figure and four bars to the cross; but in one specimen four holes are substituted for the cross. The repetition of this number four in all the gorgets is significant.

This uniformity amid diversity can not be the result of accident. Mr. Holmes says: "Were the design ornamental we should expect variations in the parts, resulting from difference of taste of the designers; the zones would not follow each other in exactly the same order; particular figures would not be confined to particular zones; the rays of the volute would not always have a sinistral turn, or the form of the tablet be always circular or scalloped." The Indians had a superstition about the number four. There were four points of the compass, though these were supposed to belong to the four winds. There were four seasons as well as four quarters to the sky. The Mexicans held that there were four periods of creation and four suns. The wild tribes have myths of the four brothers, which express both the cardinal points and the winds that blow from them.\*

The Creeks celebrated a festival to the four winds. They placed four logs in the center of a square, forming a cross, the outer ends pointing to the cardinal points. In the center of the cross the new fire is made. The Blackfeet arrange boulders in

---

\*When Capt. Argoll visited the Potomac in 1610, a chief told him, "We have five gods in all. Our chief god appears often to us in the form of a mighty great hare; the other four have no visible shape, but are indeed the four winds which keep the four corners of the earth." See Brinton's *Myths of the New World*, p. 181.



the form of a cross, which are attributed to the "old man in the sun who sends the winds;" they mark his resting-places; the limbs of the cross representing his body and arms. Among the Delawares the rain-makers would draw upon the earth the figure of a cross, and cry aloud to the spirit of the rains. The Navajoes have an allegory that when the first man came up from the ground, the four spirits of the cardinal points were already there. The Quiche legends tell us that the four men were first created and that they measured the four corners and the four angles of the sky in the earth. Their wives were the four mothers of our species. In the Yucatan mythology the four gods were supposed to stand at the four corners of the world supporting the four corners of the firmament, very much as in Norse mythology four dwarfs held up the skull of Odin to symbolize the sky.

V. We now turn to consider the position which the cross held in the hieroglyphics of the civilized races. We have so far considered it as found among the uncivilized. The tokens among these are very primitive; rock inscriptions, shell gorgets, earth-circles, carved images, and the symbolism seems to be as rude and primitive as the tokens themselves. Among the civilized races the symbolism is much more elaborate, but the ideas are the same. There are many crosses among the writings of these races; they are found not only in the manuscripts and books which have been preserved, but in the hieroglyphics and tablets which have been discovered.

We shall first consider the manuscripts or codices. We are indebted to Dr. Cyrus Thomas and Dr. D. G. Brinton for our information on this.\* The codices are largely symbolic. They contain a kind of picture writing very much as do the rock inscriptions, but are more systematic and are more easily interpreted. They have been studied as well as the alphabets in which they are written, though the study has not yet resulted in anything satisfactory. We shall not undertake to interpret these codices, but only to show their symbolic character and to show that the symbols of the cross and the sun are contained in them. We give several figures or cuts which will illustrate the point. One thing has been secured—the names and symbols for the four cardinal points, and a few of the numerals.

The names of the codices are as follows:

First. The Codex Cortesianus, which contains the Tableau des Bacab, or plate of the Bacabs, supposed to be a representation of the gods of the four cardinal points. The Codex Peresianus which, contains a kind of tabular arrangement of certain days, with accompanying numbers. Next, the manuscript

---

\*See manuscript Troano.

See Third Annual Report of the Bureau of Ethnology.





























































	5 Kan		12 Kan		6 Kan		13 Kan		
	6 Chichan		13 Chichan		7 Chichan		1 Chichan		
	7 Caniy <i>2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13.</i>		1 Caniy		8 Caniy		2 Caniy		
	8 Manik		2 Manik		9 Manik		3 Manik		
	9 Lamat		3 Lamat		10 Lamat		4 Lamat		
	10 Muluc		4 Muluc		11 Muluc		5 Muluc		
	11 Oc		5 Oc		12 Oc		6 Oc		
	12 Chuen		6 Chuen		13 Chuen		7 Chuen		
	13 Eb		7 Eb		1 Eb		8 Eb		
	1 Ben		8 Ben		2 Ben		9 Ben		

PLATE II.—ALPHABETIC CHARACTERS OF THE CODICES.



Troano, which has about the same arrangement. Next, the Dresden Codex, which contains four columns of five days, corresponding precisely with the Maya days. Next is the Borgian Codex, which is Mexican and not Maya, but which gives the calendar in the form of a square, each square surrounded by a serpent; the heads of the four serpents brought near together at the center, which is indicated by a figure of the sun. Next is the Fejervary Codex, which has plates similar to the *Tableau des Bacab*. From these codices we find that the cardinal points were symbolized, and that colors were given to them—yellow to the east, white to the west, black to the north, and red to the south. From them we also find that there were four ages, four elements, four seasons, four cardinal points, and four epochs. The years were symbolized—one by the flint, another by the house, another by a rabbit, another by a reed; and the elements

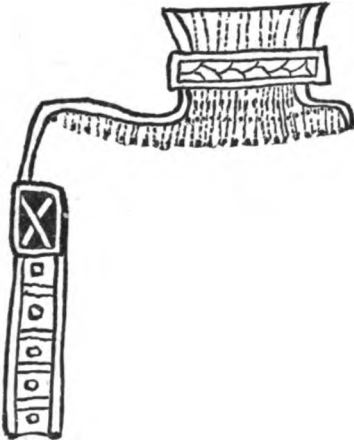


Fig. 21.



Fig. 22.

were also symbolized in the same way. The air by the rabbit, the fire by the flint, the water by the reed, the earth by the house but among the signs on all of these was the cross. The signs for the days are given in several of the manuscripts; the Codex Troano and Landas Alphabet. See Plate II, at the right hand. It will be noticed that there crosses in all of the columns; crosses with the sun symbol or circle in the center. The day *Muluc* has this symbol. This is significant, as the names of the days are derived from natural phenomena. The hieroglyphs for the points of the compass contained in the manuscript Troano has also the cross with the circle in the center of them, especially the hieroglyphs for the east and the west.

First. The order in which the groups and characters are to

\*See Brinton's *Books of Chilán Balam*, p. 16 and 17. Also a study of the Manuscript Troano, in *Contributions to North American Archaeology*, p. 144.

be taken is around to the left, opposite the course of the sun.

Second. The cross, as has been generally supposed, was used among these nations as a symbol of the cardinal points.

Third. It tends to confirm the belief that the birds were used to denote the winds. This fact also enables us to give a



Fig. 23.

signification to the birds' heads on the engraved shells found in the mounds. \* \*

Take for example the birds' heads shown in Fig. 12. Here is in each case the



Fig. 24.

four-looped circle corresponding with the four loops of the Cartesian and Fejervary plates, also with the looped serpent of the Mexican calendar stone, and the four serpents of Plate 48 of the Borgian Codex. The four bird heads on each shell are pointed toward the left, just as on Plate 44 of the Fejervary Codex B., and doubtless have the same signification in the former as in the latter—the *four winds* or winds of the four cardinal points. If this supposition be correct, of which there is scarcely room for

a doubt, it not only confirms Mr. Holmes' suggestions, but also indicates that the Mound-builders followed the same customs as the Nahua nations and render it quite probable that there was more or less intercourse between the two peoples.



Fig. 25.

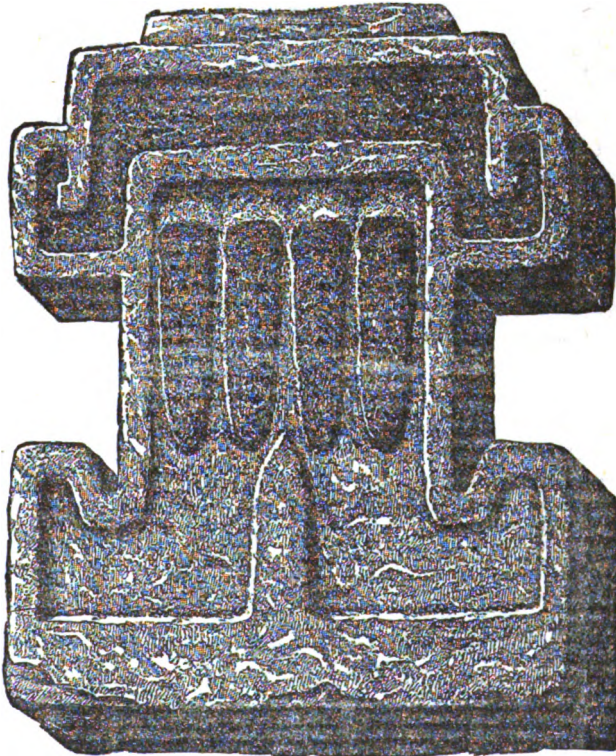
We give a few cuts to show the symbolism which prevailed in the manuscripts. One of these is the Mexican symbol for the day (Fig. 23), and another is the Mexican symbol for the year (Fig. 24); another is the symbol for the house (Figs. 21 and 22); another is the symbol for the temple or shrine (Fig. 25). It will be noticed that the house has a wall composed of blocks, each block marked with a circle, but at the top of the wall is a cross. In the figure for the shrine there appears to be a seat or a throne. On the back of the throne are two crosses and above it another cross. There is another figure

of the house contained in the Dresden codex. The former were from the manuscript Troano.

VI. We turn now to the carved stone figures and idols to show that the cross is used as a sun symbol. There are many specimens of this kind; they are mainly found in Mexico and in the ancient cities of Yucatan. These figures were evidently symbolic and were parts of the symbolism of the sun. They are

sometimes ornamented with human faces, the faces being characterized by a protruding tongue, but more frequently with the heads and tails of serpents; in some of these the carving is very elaborate and the ornamentation very complicated. We give a few specimens of these carved idols and altars.

1. First is the cross of Teotihuacan. See Fig. 26. It will be noticed that this is an altar in the shape of a cross, the arms of the cross forming a support for the altar, but the base of it is ornamented with peculiar figures, which may possibly be intended to represent the tails of serpents. This altar is supposed by Monsieur Hamy to be sacred to the god Tlaloc, the Mexican



*Fig. 26—Cross of Teotihuacan.*

god of rain. Very little can be said of it except to draw attention to the form. Dr. Hamy has described another which is called the "cross of the serpents." It has the same general shape, but the arms are engraved to represent serpents' heads. These altars were found near the pyramids of Teotihuacan, a fact that shows they were associated with the sun worship, as the pyramids were all devoted to that purpose.\*

3. The second specimen is one which resembles this, but which

\*See *La Croix De Tiotihuacan au Musee Du Trocadero*, p. 19.

is much more elaborate. It is the idol pillar which was discovered in the Plaza Mayor in Mexico in 1790. "It is an immense block of bluish-gray porphyry about 10 feet high and 6 wide and thick, sculptured on front, rear, top and bottom, into a complicated and horrible combination of human, animal and ideal forms." Gama first expressed the opinion that the front represents the Aztec goddess of death, whose duty it was to bear the souls of the dead warriors to the house of the sun. The figure on the rear of the idol represents, according to Gama, Huitzilopochtli, god of war, and husband of the goddess whose emblems are carved on the front. The bottom of the monument bears the sculptured design which is thought to represent the god of the infernal regions, Mictlantecutli, the last of this cheerful trinity—goddess of death, god of war and god of hell, three distinct deities united in one idol."\* This idol is in the shape of a cross, a fact which shows that either the cross as known in Christian lands as an emblem of peace has been perverted and made to represent just the opposite qualities, or it is a symbol which grew up under the cruel system of the Aztecs, and was changed from the common weather indicator to be a sign of the nature gods, who became more and more cruel as they became personal. The cruelties which were practiced in connection with that system have been described. They were elaborate and studied, but were as severe as these emblems would indicate them to be. The adornments of royalty are surmounted by the fangs and claws of the serpent; the hands, which should indicate mercy, are placed below the cruel fangs of the serpent; in the midst of the cross, which is an emblem of life, is the grinning skull, the emblem of death. The whole idol, which reminds one of the divinities of the air, is covered with emblems of the creatures of the dust; darkness and death are symbolized rather than vital life. Plate III.

3. Another specimen of the cross is the one described by Mr. H. H. Bancroft. See Fig. 27. It was one of two statues exactly alike which were found on the southern slope of the pyramid of Palenque, which contained the temple of the cross on its summit. They are ten and a half feet high, of which two and a half feet not shown in the cut formed the tenon with which they were embedded in the wall. The figures stand on a hieroglyph which perhaps the name of the individual or god represented. These statues are remarkable as being the only ones found in connection with the Palenque ruins and even these are not statues in the "round", since the back is of rough stone, and was likely embedded in the wall. The resemblance of this figure to some Egyptian statues is remarked by all. This statue is evidently in the shape of a cross, though the arms of the cross are near the summit and are formed by projections of the head-dress. The emblems on the statue are

\*Bancroft's Native Races, Vol. IV, p. 544.





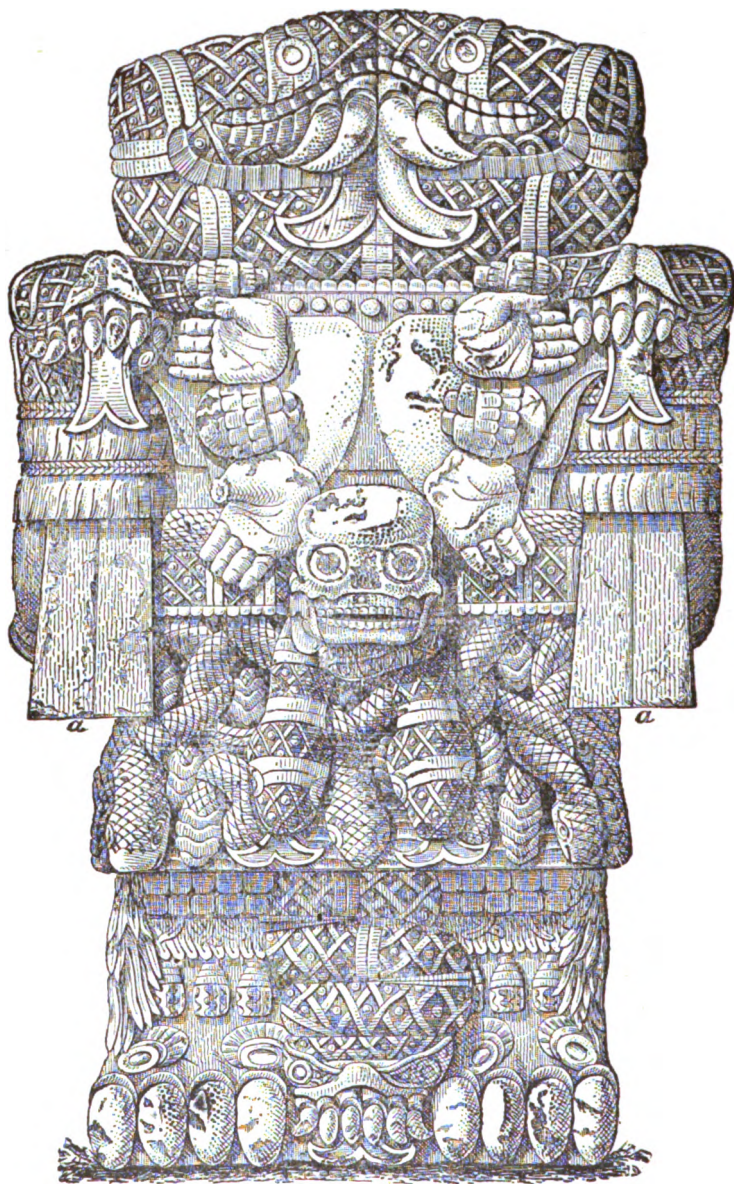


Plate III.—Serpent and Cross—The Goddess of Death, Huitzilopochtli.

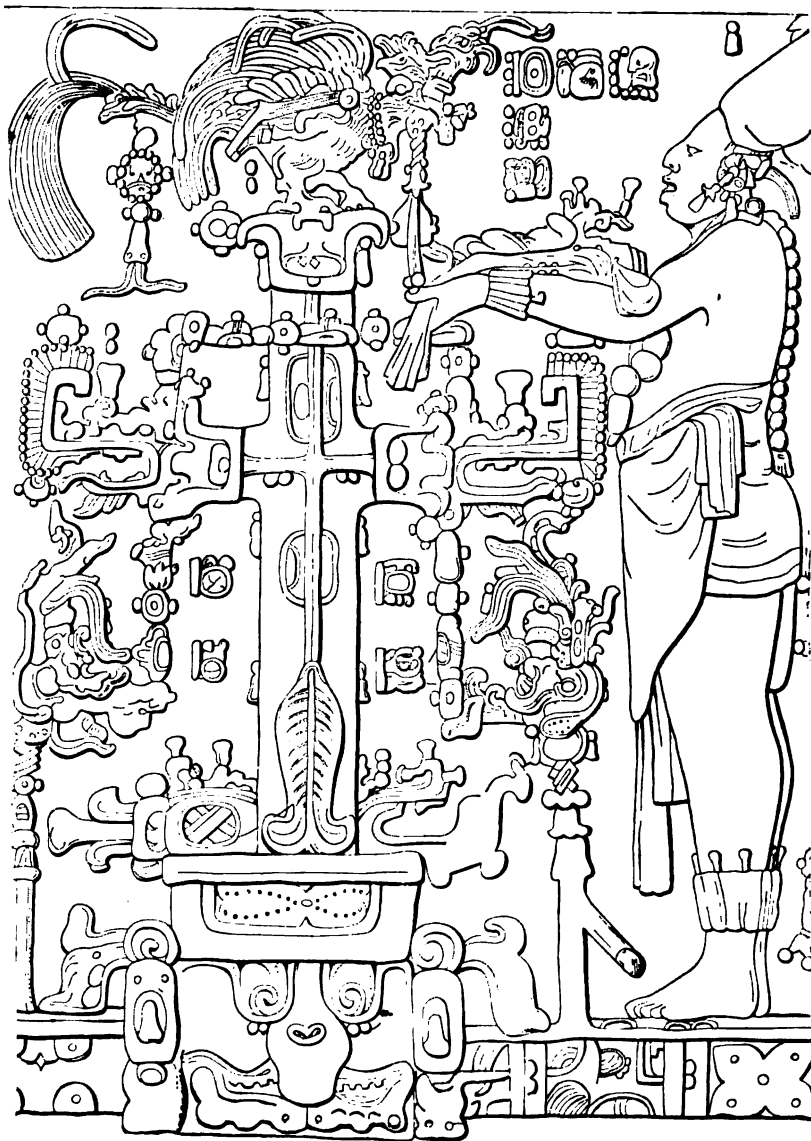
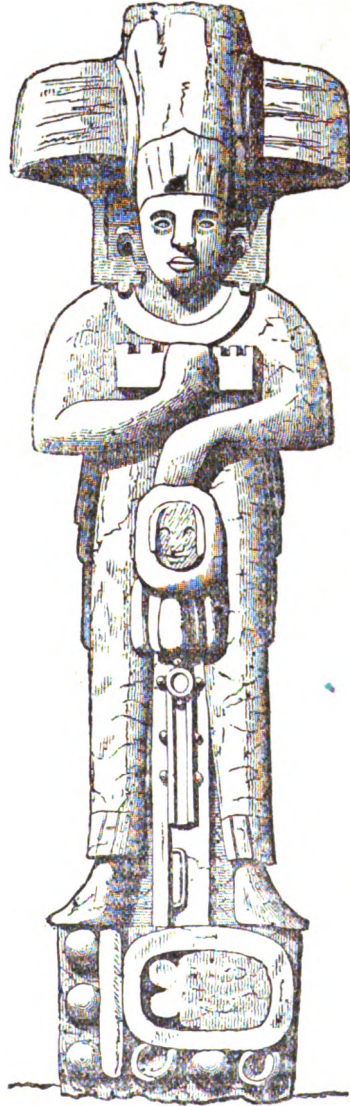


PLATE IV.—CROSS ON THE PALENQUE TABLET.



peculiar. An object resembling the Nile key is held in one of the hands, a medallion which may be taken as a sun symbol is held in the other hand; below this are objects which may perhaps be phallic symbols.

4. Perhaps the best known specimen of the cross is the one which is contained on the Palenque tablet (see plate IV,) in the temple at Palenque, the same temple referred to above, the statue having been found on the sides of the pyramid and the tablet in the shrine on the summit. The following is the description: "Fixed in the wall at the back of the enclosure and covering nearly its whole surface was the tablet of the cross, six feet four inches high, and ten feet eight inches wide, and formed of three stones. The central stone and part of the western, bear the sculptured figure shown in the cut; the rest of the western and the whole of the eastern were hieroglyphics. The subject doubtless possessed religious signification, and the temple or adoritorio may be considered as a sacred shrine or the most Holy Place of the ancient Maya priesthood. Two men, probably priests, clad in the insignia of their office, are making an offering to the cross or to a bird placed on its summit." Of the two priests Stephens says: "They are well drawn, and in symmetry of proportion are perhaps equal to many that are carved on the walls of the ruined temples of Egypt. Their costume is in a style different to any heretofore given, and the folds would indicate that they were of a soft or pliable texture like cotton." Stephens and other writers discovered in the object offered a possible likeness to a new-born child. The symbols on this tablet are worthy of study. It will be noticed that the cross itself is formed by a



*Fig. 27—Idol Pillar.*

standard in the center of which is a feather headed arrow, point upward; the arms are formed by the common weapon of war, the maxtli, with its crooked head pointing upwards. Fig. 28. The cross is supported by an animal head which probably represented some nature power. The bird reminds one of the thunder-bird of the northwest coast, and yet here we are in doubt about its significance. There is suspended from its tail a medallion which may be regarded as a sun symbol. The head is a circle with a dot in the head, which would ordinarily be called a sun symbol. The emblems on this cross are mainly the emblems of war. In that respect it differs from the one which we have already described in which the emblems are more those of agriculture, taken from the vegetable world. The significance of the emblems in this case, would be that the altar was devoted

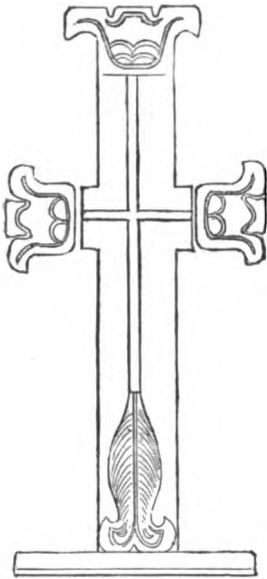


Fig. 28.—Cross of the Tablet.

to the war god. On the exterior wall of this temple were two stone tablets sculptured in low relief, representing figures or persons elaborately draped and decorated; one of them wears a leopard skin as a cloak. That the cross in this case was intended as a symbol of the nature powers is evident from the following fact: "On an adjoining pyramid was a temple which contained a tablet, in a similar situation to that of the Temple of the Cross; but the symbols on the tablet were symbols of the sun. This gave rise to the name, 'the Temple of the Sun'."

We regard this, then, as another specimen. The symbols in the Temple of the Sun are suggestive of sun worship. The form of the tablet is similar to that of the one in the Temple of the Cross; hieroglyphics and priestly figures are seen on either side of the central symbol. The symbol itself is in the shape of a face with an open mouth, and bulging eye; around the face are circles and knots, and symbols of various kinds; outside of these are figures which resemble bow-knots. This mask is suspended on two staves which cross one another forming a letter X. The head of the staves being decorated with various symbols; below the staves is a heavy beam which also bears a grotesque face at its center, with eyes and lips resembling those in the masks above. This beam is supported by two bent figures, each of them in the same attitude, having eyes and faces, and heads and dresses, resembling one another. These figures may be intended to represent the God Tlaloc, the god of rain, as they have the eye which is characteristic of

that divinity. The mask above was evidently intended to represent the sun, as it has the face which is everywhere recognized as a symbol of the sun. The proximity of the two pyramids and the two temples, the Temple of the Cross, and the Temple of the Sun, would indicate that they were both devoted to the same nature powers, the one to the sun as a peaceful divinity and the other to the nature power as a war-like divinity.

6. The most interesting specimen of the cross is the one which is described by Charnay as found by him on a tablet at Lorillard. This tablet contains two figures, both of them clothed in royal apparel, which is covered with symbols. The larger person has a cross in either hand, resembling the one given in Fig. 29. The smaller one has also the same kind of cross in his hand. Charnay says of this tablet: "It occupies the central door of the temple, and is 3 feet 9 inches long, by 2 feet 9 inches wide. Two figures with retreating foreheads form the main subject, having the usual high head-dress of feathers, cape, collar, medallion, and maxtli, like the idol; while their boots are fastened on the instep with leather strings, as similar figures at Palenque. They are of different size, and represent probably a man and a woman performing a religious ceremony; the latter holds in each hand a Latin cross, while the other carries but one in the right hand. Rosettes form the branches of the crosses, a symbolic bird crowns the upper portion, whilst twenty-three katunes are scattered about the bas-relief. We think this a symbolic representation of Tlaloc, whose chief was a cross, which here consists of palms or more probably maize-leaves, intermingled with human figures, recalling to the memory of his devotees the god who presided over harvests.\*

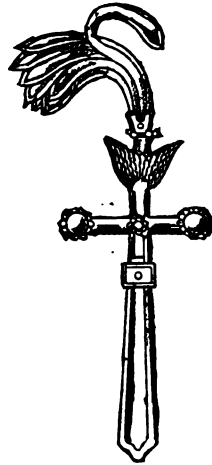


Fig. 29.

\*See Ancient Cities of the New World by Desire Charnay, pp. 448 and 449.

## Correspondence.

---

### FRAUDULENT RELICS.

*Editor American Antiquarian:*

The interest taken in gathering the remains of our almost extinct aboriginal people has so added to the value of their relics, that men devoid of principle and honesty have undertaken to counterfeit many, if not almost all, of the objects discovered in this country. From the common arrow-head to the finest forms of stone objects and pottery, have these knaves plied their nefarious trade. Many have been exposed by investigators, and more still at work remain to be uncovered. Why are these fraudulent objects manufactured? The answer is easily given. Many collectors are persons of means who merely gather for the sake of curiosity; never study the objects coming into their hands, and always willing, to get ahead of their neighbors, to pay any price asked for an article, without asking about the authenticity of the specimen. To this class of collectors can be attributed the cause that "Flint Jacks" are springing up in every session of our country, to the debasement of the noble science of archæology. Allow me to cite an instance without giving names. Should the parties interested read this they will certainly know to whom I refer. There was found, so it was written to me by the finder, several years ago, somewhere in Ohio—I have forgotten the spot—a curious double horn-shaped ceremonial weapon, having at each end a boss, formed as are the brass knobs which farmers place on the ends of vicious cattle. This object, the writer told me, he had sold for fifty dollars to a collector living in one of the largest cities in New England. I have frequently been asked twenty dollars for objects of stone and pottery. To my mind it is damaging to collect or to own a nicely wrought hematite object, unless the owner is also the finder. The writer saw a collection, only a few days ago, in Philadelphia, in which were placed objects of this kind. How many more have found resting places in cabinets throughout our land? Is it not time to call a halt to this iniquitous business? By all means it is. How can it be stopped? Allow me, please, to suggest to those who collect only for curiosity's sake to at once commence studying the ob-



jects with which they become possessed. Buy standard books and journals and become students, educating yourselves to know the difference between a true and fraudulent relic. It will pay you an hundred fold. Cease to pay prices that dealers ask, even if you cannot add to your cabinet an object you desire, and do not buy a relic unless from one who can prove that it is a genuine object.

I quote from Prof. Otis T. Mason, p. 4 of his "An Account of the Progress in Anthropology," in the year 1885, to be incorporated in the Smithsonian Report for 1885, in reference to archæological frauds: "Aristotle's rule not to believe an archæologist unless he preserves the evidence of his assertions, will have to be rigorously applied in order to subdue this pestilential element in a noble science." Excellent advice which should be followed to the letter.

The Smithsonian Institute is doing much to bring to light counterfeits of this kind. The Bureau of Ethnology has done good work in the same field. Prof. F.W. Putnam, curator of the Peabody Museum of Archæology, has, I know not how often, touched on this subject. The late and learned archæologist, Dr. Charles Rau, up to his death the curator of the archæological department of the Smithsonian Institute, insisted that a well-known collection, shown throughout Europe several years ago, was fraudulent, and proved this assertion when he deposited in the Institution a similar collection made by the same parties.

The writer could, if space allowed, cover pages of this journal in telling its readers of frauds he has seen in collections. Specialists even have been caught. Is it not then necessary to use the greatest care in gathering relics? It is, and as one who delights in studying the exalted and fascinating science of archæology for the truths it brings, I take much delight in telling my readers, and I hope they will profit by it, that I have discovered a new station where fraudulent chipped objects are made. I am sorry, too, it is so near my own home. This rogue makes chipped objects of most fantastic form, only, however, out of material which is easily chipped. He is at all times anxious to get large broken spear-heads or knives or flakes, for which he offers to pay a price, or give in exchange a few of his wonderful finds. Should he get a lot of very small, broken points or flakes, he becomes very angry and the sender receives a reprimand. In exchanging his ware he tells those who deal with him that the objects were made by the Tuscarora Indians when they lived here.

The man from whose hands these fraudulent specimens have passed, lives at Owensburg, Schuylkill County, Pennsylvania. He is by trade a cabinet-maker, and claims to deal in antique furniture. The land embraced in the present Schuylkill County belonged to the Delaware or Lenni Lenape Indians,



and the nearest the Tuscaroras ever came to this was when they emigrated up the valley of the Susquehanna to join the Iroquois, of which they were the sixth nation. From correspondence of his now in my possession, I find he has sent his frauds to many collectors throughout the United States and Canada, and I am sorry to say his creations seem to be in great demand, proving how little the average collector knows what he is gathering. He boasts that the demand is greater than he can furnish. In a letter to the writer he outlines a few of his wares. These consist of double barbed, pronged similar to a trident, the middle and longer prong having a barb, double-pointed objects, and a knife-shaped specimen having a flaring tang, which he calls a knife or sword arrow-head. His prices are from twenty-five cents to a dollar for each object, and I suppose he has made some money in this questionable venture. He refuses to explain to me how he makes them. In mitigation of his offense, he claims that the frauds sent out have real chippings of the Indians on them. This is true, as most of his objects are made from real broken relics.

Allentown, Pa.

A. F. BERLIN.



8

## THE COPPER AGE IN EUROPE.

*Editor American Antiquarian:*

There are three periods of the stone, bronze and iron implements, that in Europe are admitted by the greater number of archæologists. This fact was fully admitted at the end of the first part of this century, and it has been accepted by the greater part of European archæologists. But there is a new period which appears on the horizon of European prehistoric archæology. It is the copper, entering between the stone and the bronze age as a period of transition. For the Asiatic Indies and for several parts of North America this is contended an established period, but for Europe for a long time no man would admit it as a system. There is no doubt of the rarity of copper implements in Europe, so supposed and often repeated by the archæologists. Now the matter has changed. Dr. F. Keller, the illustrious discoverer and explorer of the Swiss lake dwellings, has said in his fifth report of lake dwellings, in 1863, when he compared the copper and bronze implements of the Hungarian collection with the relics of the Swiss lake dwellings, that there must have existed in Hungary (Ungarn) an age in which were used not the bronze, but only the copper. This idea has been accepted by the Hungarian archæologist, Fr. de Pulsyky, who published, in 1884, his fine

work on "The Copper Age in Hungary,"\* and proved that in Hungary, after the stone age and before the bronze period, had existed a copper age. 'His typical forms are the celts of copper in the form of the stone axes and the hammers of copper in the forms of the perforated stone hammers. I am not the man to write you this in English and to enter here into details. I will only say that the publication of Pulsky has received on all sides great attention, and after having proved the copper age for Hungary, stands now beyond all discussion. After this, there is the question of a copper age belonging to the other parts of Europe, the copper objects in the other parts of the European continent being, or, it is said, seeming to be, very rare. In Switzerland the explorations of the lake dwellings in the years 1870 to 1880 had given a great number of new specimens, and especially those of the bronze age. I only cite here the fact that one found not a small number of models to form the bronze objects, proving that some one there has fabricated—re-formed in *loco* the bronzes! A second and not less important discovery were the objects of copper as they were found by Dr. Gross in the lake of Bienné. There were axes, beads, points, etc., of copper, and Gross published them in his work "Les Protohelvetes,"† noting there these copper implements of the last period of the neolithic stone age as really belonging to the copper age. But if the copper finds noted by Gross were not numerous enough to prove a veritable copper age for Western Switzerland, all Switzerland, with its more than 200 lake dwellings and its finds of more than 50,000 pieces the few copper objects published by Gross could not be accepted as indisputable proofs for the new period, the copper age.

I then prepared statistics of the copper implements, and with the aid of different archæologists and collectors and studies in the different Swiss museums and private collections, I was enabled to present more than 250 implements of copper—indisputable proofs for a copper age in Switzerland.‡ There were in the first place several axes in the form of those of stone (neolithic stone age); in the second place copper axes in the forms of the first bronze celts (*Kragenculte*, *haches à bords droits*).

Then there were points of copper, in the form of those of bone found in the lake dwellings of the stone age; daggers of copper, in the form of those of flint, others perfected and approaching to the forms of the bronze daggers; pins, beads, rings, etc., of copper; knives of the same metal, pendants, etc. The knives are imitations of the flint knives, and were formed

\*Fr. de Pulsky: *Die Kupferzeit in Ungarn*, Buda-Pest, 1884, with tables and figures in text.

†F. Gross: *Les Protohelvetes*, Berlin, 1883, with many tables.

‡R. Forrer: *Statistik der in der Schweizer fundenen Kupfergerathe*. *Antiqua*, Special-Review for prehistoric Archæology. Zurich and Strassburg. Paper, 1886, with many tables.

more and more in the shapes in which we now see them—the bronze knives of such magnificent forms.

The beads were first small sheets of copper, hammered out and then rolled into a cylinder; then they took the form of beads, as we see them of bronze in the bronze age.

The spirals in copper were the prototypes of the many spirals in bronze which we find so often in the lake dwellings of the bronze age. One has also found two pendants in copper knives blades whose forms were imitations of the perforated teeth of deer (*ursus*, etc.), which are found generally in the stations of the stone age. We find that the copper implements of Switzerland represented on one side the stone objects of the neolithic age, imitations in copper of them, and on the other side the copper implements show us new types and represent the forms of the eldest bronze implements of the bronze age. I could also show a special typical ornamentation for the Swiss copper age; it is in one part a perfection of the ornamentation of the stone age, and in the other part the first beginnings of the ornamentation which is found in the bronze age.

These facts, of which I have given here only a part, were written by me in the first part of the year 1885 and published in the second half of the same year. At the same time, not knowing anything about my special studies of the Swiss copper age, Dr. Much, the happy explorer of the lake dwellings upon the Mondsee, etc., in Austria, prepared a work on the copper age in Europe. In the lake stations of the Mondsee, Dr. Much had found a relatively great number of copper implements, and these discoveries have induced him to study this question, especially on European territory.\* His work was printed up to the second chapter on the copper finds, when he received my Swiss statistical material, upon the extension of the prehistoric implements, he says as follows: There were found, in Austria, in the lake dwellings of the Mondsee and Ottersee, axes, daggers, needles, fishing hooks, spirals, pieces of copper not travelled and *schmelztiegel*; in an ancient copper mine on the Mitterberg alp, three hammers used to pick the metal, copper metal in different conditions, etc.; on the Göttschenberg and in other places rests of molten copper; on the Kelchalpe, in Tyrol, *Erzyrubed*, in Stallhof, axes, rings, etc., in copper; in the lake dwellings of Labed, axes and needles of copper and models to form the objects; from other places in Austria, arrow-points, celts, hammer-celts, *fouilles*, rings, daggers, etc.; in Germany, same inventory of different places; in Switzerland was the greatest number, as stated before; in Denmark, several celts in the form of stone axes, but of undetermined province; in England, copper ornaments and celts, and in Ireland a remarkable number of copper celts; in

\*Dr. M. Mude: *Die Kupferzeit in Europa und ihr Verhältniss zur Cultur der Jüdagermauer*, Wien, 1886. With tables.

Belgium, two pieces; in France, there were beads, axes, etc., of copper; in Portugal, axes, arrow-points and daggers; from Italy, Dr. Much notes six copper celts of different provinces and I could double this number by other copper axes, etc., that I have seen there or possess in my collection of this province; from Cyprus the illustrious Dr. Naue has published in the *Antiqua* an interesting account of daggers, spear-heads, etc., in copper, found in places in Cyprus; the Grecian Islands have furnished some copper implements, also in Greece copper implements have been found; the same thing may be said of Asia Minor, where Dr. Schlieman has found copper axes, needles, knives, etc., and contends that there is a veritable copper age; also in Spain have been found at different times copper implements. In the museum at Brussels, I have seen, together with stone implements and an axe of copper in the form of stone axes, a dagger, an arrow-head and four needles of the same metal from Southeastern Spain. Messrs. H. and L. Siret have prepared a work on the eldest metal age of Southeastern Spain. The great number of copper articles they have found there is the best proof of the existence of a veritable copper age in the southwestern part of Europe. In Portugal, the illustrious Prof. Rudvirdov proved the same fact several years ago before the Congress at Lisbon. It is quite remarkable that all copper implements found in Europe have the same primitive forms.

In most cases these copper articles have been found with stone implements or with objects of the bronze age. The copper implements are partially hammered and partially moulded; several of them show traces of hammer blows, other pieces show irregularities coming from the molding. In not a few cases one has found, with the copper implements, primitive models and matrices for the moulding (Gross), as also copper with traces of moulding. Dr. Much extends the copper age over the whole of Europe, but I think that we must look to the several parts of Europe for a great number of copper finds. It is especially in the north of Europe where most of the copper implements have been found, and it would seem better to seek further finds in that region.

A copper period no doubt existed in Ireland, Switzerland, Hungary, Austria, Spain and Cyprus. This will no doubt prove to be the case in Italy, France, Greece and a part of Germany, as soon as the local archæologists have prepared statistical material—as Pulsyky has proved for Hungary, Dr. Much for Austria and the writer for Switzerland, as the collection of Dr. Naue proves for Cyprus, the finds prove the same fact for Ireland, and now the discoveries in Spain for this part of Europe.

Yours truly,

R. FORRER,

Editor of the *Antiqua*.

Strassburg.

†  
*Part. 4. D*

## Editorial.

### ARCHÆOLOGICAL RELICS IN THE OHIO EXHIBITION.

We have in several numbers of *THE ANTIQUARIAN* called attention to the antiquities of Ohio. We now turn again to consider these tokens as they are brought out by the exhibits of the present year. It is worthy of notice that the centennial anniversary of the settlement of this State has had a tendency to increase the interest in the prehistoric archæology of the region. A large number of gentlemen from all parts of the country have been or will be making their way either to Marietta, to Cincinnati, or to Columbus with a view of learning something concerning the early history of the State as well as recalling the events which centered about the organization of the old Northwest Territory. These celebrations have been in the midst of the most interesting and prehistoric earthworks found in the United States and doubtless the attention of the visitors has been called to these prehistoric tokens as giving additional interest to the history of this region. Not only this but the meeting of the American Association at Cleveland has led the archæologists and scientists to a renewed interest in the whole subject. The editor of *THE ANTIQUARIAN* has had the opportunity of attending the sessions of the association and of revisiting some of the places of interest in the southern part of the State. We are happy to give a resume of these observations. We shall begin with the relics which are now on exhibition at Cincinnati and at Columbus, and especially those at Cincinnati. These relics are mainly the relics contained in private collections which have been loaned for exhibition. And yet they are valuable to the archæologist for study and for comparison, especially as they may soon be scattered and the opportunity of examining them be lost. In the Cincinnati exposition there are three departments containing prehistoric relics, namely, the government department, on the lower floor; the educational department, in the upper story; and the department devoted to Ohio, in the rear building. In the government department the exhibit is general. It contains many cases full of relics of the stone age in Europe and America. These are arranged in parallel rows, so that they can be compared, the one with the other. We commence with paleolithic relics and

then pass on to the different tokens of the neolithic, around to the advanced stage of the same age, then pass to the relics of the copper age, and so on to the bronze age. The arrangement was made by Mr. Thomas Wilson and is very suggestive. We have in the same locality on the walls and in cases pictures and plaster casts of the modern Indians, showing their costumes and equipments. On the other side of the aisle is the very interesting collection of the Pueblo villages of Arizona. These casts were prepared by the Mendelieff Brothers, from actual measurements and bring to light some new and interesting features connected with these Pueblos. In the first place the casts prove that the so-called restorations by Lieut. Simpson and Mr. W. H. Jackson are not quite correct. The upper stories are not built on the lower stories in regular lines, but are placed in a helter-skelter sort of way. The casts show also that the Pueblos were built at different times very much as additions are built to modern houses, making them higher as well as broader, the flat roof being, however, more convenient to build upon than the roof of a modern house. Another point is brought up. The population of the Pueblos has been over-estimated. To illustrate: The modern Pueblo of Zuni contains 1,600 inhabitants. If Mr. Morgan's theory about the communistic system and the number of families accommodated in a single building were carried out it ought, from the size of the buildings and their number which are scattered about, to contain at least 16,000 and even more. The Zunis seem to have taken as much room to accommodate their families as modern white men. These are modern Zunis, but the ancient Zunis did the same.

In reference to the other relics which are gathered in this exhibition, this is to be said, the majority of these relics were gathered in such a way so as to almost destroy their value to science as the custom of digging into mounds and exhuming relics without regard to their specific situation and without retaining the "legend" of the different horizons is a very pernicious one.

Still we regard the exhibition as valuable for the knowledge of the archæology of Ohio to be gained from it. We could have taken more interest to be sure if the labels had been placed on the relics so as to have identified the different relics with the different groups of mounds, or if the surface finds had been in some way separated from those taken out of mounds and these in turn distinguished from the paleolithics so recently discovered. An excellent opportunity was here for illustrating the archæology and the art of the different States which compose the old Northwest Territory. We found no such arrangement either in the historic or prehistoric exhibit. One could only carry these things in his head and make the best of the circumstances. We felt grateful to the few private collectors who had taken pains to

carry their collections to Cincinnati and place them on exhibition, and therefore mention these along with those which are found in the public museums of the city.

At the art museum in Eden Park the collection of Thomas Cleaneay has been arranged geographically so far as it could be from the notes of the former owner. Little boxes contain the relics which came from the different counties. This gives a view of the archæology of the region. The cabinet of W. K. Moorehead in the centennial building is not arranged in this way, but the relics are sorted according to their shape and finish with no legend preserved in writing. Mr. Moorehead's collection gives a view of the art forms and so is properly in the educational department. One pipe belonging to Mr. Moorehead is very remarkable. It has a bowl nearly a foot long. The stem has a wide flange something like a hoe, drawn to point near the mouthpiece in the handle of the hoe. This pipe was made from coal slate and is unique.

The collection also belonging to Mr. Harris of Waynesville, is in the Ohio building, where are also selections from many other private cabinets, including some from the cabinet of Dr. Sheridan Heighway, and from the Natural History Society of Cincinnati. A study of the Ohio relics is suggestive. A large consignment of pottery from Arkansas and Missouri belonging to Mr. Riggs, a collector and indefatigable digger, may also be seen in the educational department.

The editor takes pleasure in calling attention to these various relics, as they show how enthusiastic persons may become in gathering the tokens of the prehistoric races. Some seem to have even endangered their lives in their zeal. Collectors will be interested in examining these relics and comparing them with what they have. There is one thing about the exhibit: the cabinets look nicely. This cannot be said of all cabinets, for there are historical societies which keep their rooms looking like an old garret, and the prehistoric relics more like heaps of rubbish than anything else. Neatness and order are displayed in all of the Cincinnati collections. This is the case with the Natural History Society of Cincinnati. Here the rooms are pleasant, the custodian polite, and the relics mainly from the Madisonville cemetery are well arranged and very suggestive. The same may be said of the Cleaneay collection in the art museum, the Moorehead collection and others.

## LITERARY NOTES.

THE ANCIENT CITIES OF ARIZONA.—Mr. Frank H. Cushing has been exploring in Southwestern Arizona and has made some important discoveries. *Science* says: "The scene of his explorations is the wide valley or plain at the confluence of the Salt and Gila rivers in Southwestern Arizona. To-day railroads cross this valley, and much of it has been reclaimed by irrigation from the desert condition into which it relapsed when the ancient inhabitants disappeared. Still a wide expanse of the plain, which is forty-five miles across, remains a desert covered with sage-brush, cactus and mesquites. It slopes from the Salt to the Gila river, and advantage was taken of this feature of topography by the ancient people, in constructing canals to irrigate the whole plain. In some places these old canals have been reopened by the modern farmers, and restored to their original use. On this wide plain are many groups of mounds, in excavating which Mr. Cushing has discovered many ancient cities, to some of which he has given the names of Los Muertos, Los Hornos, Los Guanacas, Los Pueblitas, Los Acequias, etc. Los Muertos, the city of the dead, has been traced for three or four miles, and forty or fifty huge structures or communal houses have been examined.

The houses are rather large, 300 or 400 feet long and 200 feet wide, possibly larger. They were generally built of adobe bricks, sun-dried, without straw or admixture of cement of any kind. In some instances, Mr. Cushing thinks, they were four or five stories high, but this can only be conjectured from the size of the mounds, the thickness of the walls, and the quantity of the debris. Between forty and fifty of the large, or communal, houses were found in Los Muertos. In the center was a structure larger than the others, which Mr. Cushing called a temple. In this building, which was enclosed by a strong adobe wall, and in no other, were bodies found deposited in an upper story. Here there were four or five adobe sarcophagi, two of which were placed nearer the center of the building than the others, were more conspicuous, and contained what appeared from the skeletons to be the remains of men of advanced age. Mr. Cushing said that extra decorations were found on these two sarcophagi. It is supposed that this was the home of the chief ruler of the tribe, the priest or some one of exceptional note. The object of the wall surrounding the structure was probably to make it a stronghold or citadel in time of war. The temple might also have served as a general storehouse for provisions.

Other structures of a peculiar character were discovered. They were circular, and in the center of each was a fire-place. One of each was found in each city. Mr. Cushing thought that this round structure was a temple of the sun, or something of the sort, as nothing was found in them but the fire-place and some pottery. The one most carefully excavated was about 50 feet in diameter. This ancient people built all of their houses on the main line of the irrigating canal. The large canals are about twenty-five feet wide at the top, the central ditch being four or five feet wide. Certain re-



mains have been found indicating that they constructed of reeds, rafts or "balsas" on which they floated the stones with which to build their houses. In some places large ditches terminated in great reservoirs. In these, probably water was stored to be used in times of drought. The largest ditch was about twenty-five miles long. Mr. Cushing's party found on the rocks of neighboring mountains pictographs or rude etchings. All illustrated matters of a realistic nature, and did not record an individual or a nation. They represented men offering prayers for rain, herders or hunters offering sacrifices. These rock pictures are interesting, however, as bearing upon the question of the use of domestic animals by these people, and their probable acquaintance with the use of wool. In these petroglyphs appear representations of animals much like the llama of South America. They are represented in a position or attitude that the llama habitually assumes. They are so pictured as to lead to the conclusion that they were domestic animals. They are connected with a string or cord, a man having hold of the string and appearing to be driving them.

† THE SHAMAN IN NORTHERN ASIA.—A comparison between the customs, habits and language of the races of Northern Asia with those on the American continent will be useful. The following are the facts concerning the Ostyaks, which have been gleaned from various sources. The Ostyak language has striking resemblances to the Hungarian, and it is probable that the Magyar and the Finnic are identical with it. Beragzasci finds a striking similarity between the Hungarian tongue and the Algonquin of North America. It is possible that the Ostyak and Algonquin belong to the same stock. The Ostyaks are animal worshippers; they look upon the bear and wolf as highly gifted beings. After the death of one of these animals, they stuff it with hay, exult for a time over its slaughter, but place it in their "yurts" and bestow veneration on it as a guardian divinity. Shamanism prevails among them. The Shamans act as prophets or medicine-men, they possess the gift of divining; they offer sacrifices; they protect their fur clothing with metal figures of birds, fish and wild beasts, the teeth and bones of sea animals and whatever may give them a terrific appearance; they resemble the medicine-men in this respect; they pretend to be invulnerable, run swords through their bodies and perform marvellous feats; they beat their drums, rattle their ornaments, and dance around a fire, writhing and yelling as if possessed, they at last fall to the ground and the attendants cover them with skins; these, taking a cord, fasten it about the neck and draw the ends with all their might, so that the Shaman would be strangled did he not protect his throat by his hands. The Shaman presides at the religious dances. He presents the company with swords and lances, and as he strikes the two in his own hands, all begin to scream out "hiyo-hiyo" in different tones, bending their bodies from side to side. They lift up their lances at every repetition of the cry, then strike the ground. After they have worked themselves into a frenzy, they give back the lances and the women join them in the dance, all this in the presence of their idols. Their idols are only the images of their departed ancestors. When a man dies his body is buried with a reindeer, a tinder tobacco-box and pipe for use in the next world. A rude wooden image is made in honor of him and set up in their hut and food placed before it. The Shamans are thus honored also. An image of them is dressed and kept in perpetual reverence. The worship of the

Ostyaks is like that of the North American Indians. The worship of a chief divinity, of whom they never make an image and to whom they never make a sacrifice. The name of this supreme being or great spirit is similar to that of the chief divinity of the Voguls, and may be the same with the Thor of the Icelanders. The relics among the Ostyaks resemble those of the Algonquins. They wear a bent piece of horn on the inside of the lower arm, as a protection against the string of their bows, thus suggesting a use for the perforated tablets, which are so common.

THE PRESERVATION OF MONUMENTS IN AMERICA.—The Government has undertaken a work of the utmost consequence to every one interested in archaeology and history. This is the purchase of the extensive earthworks located in Ross, Highland and Adams Counties, in the State of Ohio, which are the best preserved to be found east of the Rocky Mountains. Not long ago the Peabody Museum acquired the famous Serpent mound, one of the best of all Ohio's ancient works. This has spurred the Government Bureau to make surveys throughout Ohio, to determine the character and cost of the work necessary to preserve them. So says the *American Journal of Numismatics* for July, 1888. We are glad to learn of this movement.

A committee was appointed at the meeting of the American Association in August, 1887, of which the editor of this journal was the chairman. This committee has reported in favor of making an appeal to all the citizens who have charge of public parks, cemeteries, college grounds, and fair grounds, where there are mounds or earthworks, that they should be preserved. Also suggesting that an effort be made in the legislatures of the different states with the idea that the typical works in each state should be purchased, and permanent parks be established about them, so that they may become places of historic as well as prehistoric note.

INDIAN PICTOGRAPHS.—Col. Garrick Mallery has been following up this subject under the direction of the Bureau of Ethnology. During the past summer he has visited New Brunswick and the coast of Maine, where the Micmacs and Abenaki formerly dwelt. Much of the territory is yet unexplored. These rocks are on the margin of a lake between Annapolis and Queens counties. The inscribed rocks are distinct from one another on the east side of Remyomkoodem Lake. Three other rocks are about two miles south of the above. Mr. George Creed, in 1881, noticed these. The markings contain figures of fishes, whales, wigwams, native animals, and among them etchings which are modern; houses, ships, horses, and other European objects. Mr. Mallery says: "The peculiar multiplication of the characters affords an index to antiquity beyond what is generally possible. The existence of two or three different sets of markings, all visible in different degrees of distinctness is in itself important, but in addition to that it is frequently the case that the second and third in the order of time have associated with them dates from which the relative antiquity, the fainter and dateless can be to some extent estimated. Impressions taken by Col. Mallery show a five-pointed star, an animal supposed to be a bear, an aboriginal head and bust, a very artistic moose, a cluster of three trees, separated at the roots, conjectured to signify the first, second and third chiefs of the tribe. Col. Mallery says: "The best mode of interpreting the aboriginal characters is by the sign language; this does not now prevail among

the Micmacs, but the gestures of other members of the Algonquin family can be applied." Col. Mallery makes a distinction between the religious symbols collected by Kauder as belonging to the Roman Catholic church, and those of the Aborigines; though the natives did appropriate some of these and undoubtedly placed them upon the rocks.

**ANCIENT WORKS OF OHIO, BUILT BY THE CHEROKEES.**—Dr. Cyrus Thomas has a theory that the circles and squares and other works of this type in the Scioto Valley in Southern Ohio, were erected by the Cherokees. He does not give the reasons for his belief. He divides the works of Ohio as follows: 1. Typical works by the Cherokees. 2. Defensive works of the Northern Sections, attributable to the Huron-Iroquois stocks. 3 and 4. Stone graves of the Delawares and Shawnees. 5. Effigy mounds, built by a straggling clan of the Wisconsin Mound-builders. Fortifications like Ft. Ancient are attributable to the Cherokees.

This is a very ingenious theory. There are, however, some questions to ask. 1. Why is it that the earthworks and mounds of Ohio differ so much from those of Tennessee and North Carolina? There are no such circles and squares in the latter states. The mounds are of a different type. 2. Why is it that the Mound-builders' pipes of Ohio are different from those of Tennessee? 3. If the effigy mounds of Ohio were built by a straggling clan from Wisconsin, why should they be placed so near the ancient villages circles and squares of the Cherokees, so-called. Did a wandering tribe from Wisconsin build the bird effigies of Georgia? Why build them of stone instead of earth? The Dakotas have a tradition that their ancestors came from the east and that they built the mounds of Ohio. A branch of the Dakotas, the Tuteloes, passed south, to the east of the Blue Mountains. Is it not more likely that these effigies were erected during their passage westward than by a colony which wandered back from Wisconsin? Why not consider the Dakotas the builders of the effigies of Ohio? We are anxious that Dr. Thomas should perfect his theory.

**WAS AMERICA KNOWN TO EUROPEANS BEFORE COLUMBUS.**—There has been an interesting correspondence in the London Notes and Queries on this subject. As American antiquaries may wish to know the authorities on the subject I will briefly enumerate some of them: 1. Professor Rafns' *Antiquitates Americanae*, in which a full account is given of the expeditions of Eric the Red and also Biarni Henalfson and Leif Ericson (A. D. 982-1000) and subsequent Norse discoveries. 2. Torfæus *Historia Vinlandia*, etc. 3. Malte Brun Pinkerton derived information from Torfæus. 4. Adam of Bremen. 5. Ordericus Vitatis, in the eleventh century. 6. Toulman Smith published a work on the discovery of America. 7. A bibliography of the subject has been published in the New York *Library Journal*. 8. Mr. Vining in 1885 wrote his "Inglorious Columbus." 9. Professor Reveilles Hibbert, lecturer in 1834. Last, but not least, I would refer your readers to Mr. Hyde Clarke's valuable and suggestive researches on the subject, dealing with a far more remote antiquity than the Norse discovery in Vinland. (Query: New York or New England.)

**THE MOUND-BUILDERS.**—The curious speculation of what would have been the result had the Mound-builders of America developed into modern civilization, with their wonderful superstitions and notions, or, which is the

same thing, what would happen if the mound-building instinct should revive among civilized nations, is worked out in one of the fanciful "Letters from the Planets," by our "Roving Correspondent" in Cassell's Family Magazine. The writer, our correspondent, Rev. W. S. Lach, Szyrma, under his pseudonym of Alenel supposes that such an event has happened in one of our neighboring worlds, i. e., in Cassive Land, in Mars. "They were natural hills cut into shapes of gigantic size, many times larger than the huge Colossus of Rhodes or the figure of Liberty at New York. Here, I thought, is something of the state of things that might have even now occurred on the earth had the present civilized inhabitants preserved the desire of moulding hills into the form of natural objects which once existed among the Mound-builders of Wisconsin and Ohio. Had those Mound-builders instead of being exterminated by superior races, left descendants capable of carrying out their ideas of utilizing the steam engine and dynamite and the various forces of civilization, what a strange world of wonders the western states of America would have been."

THE ISLE OF MAN.—In the middle of the Irish sea, within sight of England, Ireland, Scotland and Wales, the little Isle of Man appears—a place where the ancient and the modern are strangely mingled. There are dolmens, cromlechs, kistvaens, round-towers and druidic circles, reminding one of the aboriginal Celts; also stone crosses covered with Runic inscriptions are found in church yards belonging to the Norse era. Even the constitutional system was brought hither by the Scandinavian vikings. The title of keys reminds one of the time when the Manx house of Keys was called upon to unlock the regnant sovereign, the mysteries of their ancient laws and customs. The number of keys is twenty-four. Until recent times a measure did not take legal effect until it had been promulgated from the ancient and celebrated Tynwald mount. For hundreds of years the Manx people have annually gathered around this mountain by thousands to hear the laws read, first in English and then in the vernacular. The name *Tynwald* is derived from the Scandinavian *thing*, a court of justice, and the Danish *vald*, a bank or rampart, reminding us of the fact that the circular ramparts possibly may have been used for the same purpose.

The Tynwald mount is a singular artificial construction, built of earth brought together from the seventeen parishes of the island. Two hundred and fifty-six feet in circumference at the base, it rises to the height of about twelve feet, by four concentric circular platforms, on the uppermost of which the governor and other dignitaries stand while a syllabus of the new statute is read by the deemster of the northern division. The canopy which separates them from rain and sun is held in place by seventeen ropes attached to rings in as many stones at the bottom of the hill.

As to the religion of the island.—The druidical circles scattered over the island indicates the distant source of many mythical beliefs. The spectre hound *Mqddy Dhao* and a hairy satyr, *Phynnoderee*, are said to haunt Peel Castle and Valla Connay bridge. The language is a mottled monumental record of the former faith in supernatural beings, magic and demonology.

The native language is a dialect of the Celtic and said to be easily understood by those who speak the Larse, Galic, Cymbric and Breton.

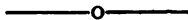
The name *Man* has been connected by some with the ancient law-givers, *mana*, *menu*, *Mino*, and *menes*, or it may be derived from its position as the

middle island—*Mannin*—of the British Islands. The national hero was Mannanant beg Mac y Leir, the father of Finn Mac Conl of the Irish legions. His conversion was effected by St. Patrick.

**CREMATION.**—Bodies in North Carolina have been discovered with faces covered with a coating of clay. Fires were built on these, the clay baked and then soil thrown on the top of all. Prof. LaConte speaks of cremation among the Indians of the Western Rocky mountains, in which the eyes were offered to the sun.

**COPPER IN AFRICA.**—A remarkable people on the Congo has been found who do a great deal of copper inlaid-work of a highly artistic character. Enormous spear-heads of a very thin copper, six feet in length, are said to serve as a kind of currency. Ornamental battle-axes have been described.

An article of especial interest at this time will appear in *Scribner's* for September, under the title "Presidential Campaign Medals," by Gustav Bobbe. It will describe many of the unique devices which, since the year 1824, have appeared on medals during the great electoral contests. More than fifty of these medals from very rare collections have been reproduced as illustrations for the paper.



#### BOOK REVIEWS.

*The Prayer of a Navajo Shaman.* By Dr. Washington Matthews. From the *American Anthropologist*, Vol. 1, No. 2, April, 1888.

This prayer is a very interesting specimen of aboriginal literature. We give it stripped of its verbiage and repetitions. It may seem tiresome to the average reader; it would be tiresome if we had repeated the whole of it, but it reminds us of the Hebrew Psalms and the poems of Ossian, notwithstanding its tediousness. It is strange how the wild mind works. Images of clouds and mists and mountains under the figures of doors, chambers, and tents, with beasts and birds and serpents, to guard the doors. The divinities are shadowy, as they are in Ossian's, but the lodge is real and so is the cornfield. The picture is graphic; to the land of the spirits the Shaman had gone; there all is silent, but the shades or spirits are permitted to return. The spirit comes back to the body and gets a vision of the familiar trails and the beautiful fields of corn; it enters the lodge where there is daylight; it takes possession of the body and all its parts; the voice is restored, and then the world and all things around it are restored in beauty, beauty, beauty, beauty. There is exaltation at the close. It is certainly a remarkable prayer. We are thankful to Dr. Matthews for it.

"From the summit of Jemez mountain Nagaynezgan comes for my sake"—From the summit of San Francisco mountain Thobajischeni comes for my sake. On this side thereof, on the top of Black mountain, Nagaynezgan comes on this side thereof, on the White ridges Thobajischeni comes,—although Smooth-Wind guards the door, Nagaynezgan with his black wand opens the way for me; behind him Thobajischeni with his blue wand opens

the way. Through the first chamber, made of the black cloud; through the second chamber, made of the blue cloud; through the third chamber made of the yellow cloud; through the fourth chamber, made of the white cloud—Nagaynezgani with his black wand opens the way, and behind him Thobajisчени with his blue wand opens the way. Through the first chamber, made of the black mist; through the second chamber, made of the blue mist; through the third chamber, made of the yellow mist; through the fourth chamber, made of the white mist; through the Red river's crossing—Nagaynezgani with his black wand arrives for my sake, Thobajisчени with his blue wand arrives. Through the first chamber, made of the black mountain, though Red Bear guards the door; through the second chamber, made of the blue mountain, although the Great Red Serpent guards the door; through the third chamber, made of the yellow mountain, although Red Coyote guards the door; through the fourth chamber, made of the white mountain, although Red Paws guards the door—Nagaynezgani with his black wand opens the way, and behind him Thobajisчени with his blue wand opens the way. In the entry of the red-floored lodge, the house of the woman chieftan, at the edge of the lodge, beside the fire-place of the lodge, in the middle of the lodge, in the back of the lodge, Nagaynezgani with his black wand opens the way, behind him Thobajisчени with his blue wand opens the way; opens the way to where my feet are lying, to where my body is lying, to where my mind is lying, to where the dust of my feet is lying, to where my saliva is lying, to where my hair is lying, Nagaynezgani places his great stone knife and his talking pathawan in my hand with them he turns me round as the sun moves until I face him.

"Woman Chieftan, my grandson, is now restored to me, seek not to find him, say not a word; now we start back with my grandson, he is restored to me. Nagaynezgani with his black wand opens the way for me; he goes out before me. I go out behind him; Thobajisчени opens the way, he goes out, returning behind me; from the middle of the lodge, at the end of the lodge, through the entry of the lodge, through the first chamber, made of the white mountain, although Red Hawk guards the door, through the second chamber, made of the yellow mountain, although Red Coyote guards the door, through the third chamber, made of the blue mountain, although the Great Red Serpent guards the door, through the fourth chamber, made of the black mountain, although Red Bear guards the door, through the Red rivers crossing, Nagaynezgani with his black wand opens the way for me before me; behind me Thobajasчени with his blue wand opens the way; they are returning with me. Through the first chamber, made of white mist, through the second chamber, made of yellow mist, through the third chamber, made of blue mist, through the fourth, made of the black mist, they climb up returning with me.

Through the white cloud, the yellow cloud, the blue cloud, the black cloud; through the place of emergence, although smooth wind guards the door Nagaynezgani with his black wand opens the way, and Thobajasчени with his blue wand opens the way. At the place called Coyote Race Course, at the place called Two Hanging Gourds, at the place called Brown Pinnacle, at the place called Breeze-Under-a-Tree, Nagaynezgani with his black wand opens the way, Thobajasчени with his blue wand opens the way. At a place where I see the direction in which my lodge lies, Has-

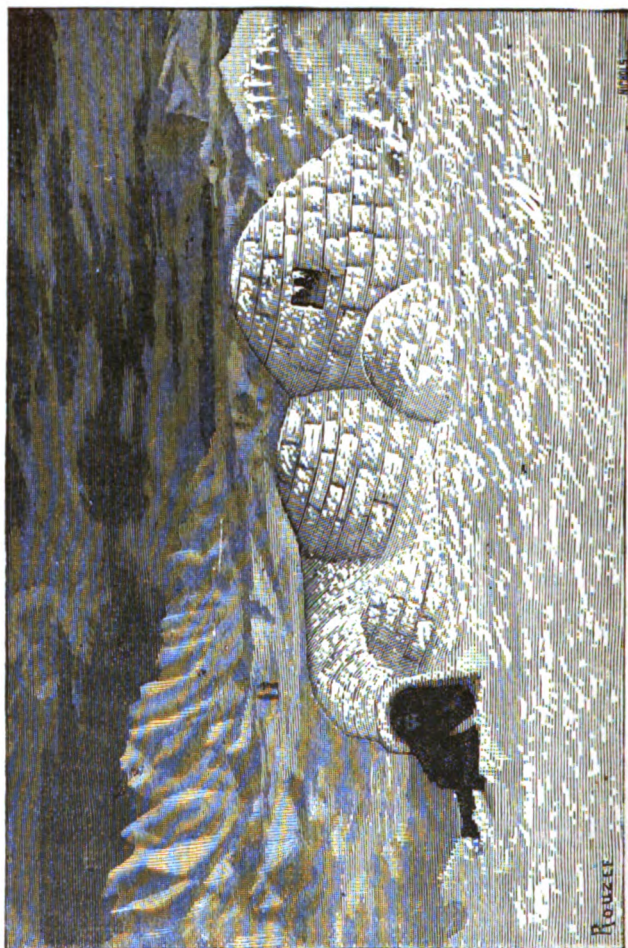
chayalthe with his white wand opens the way for me; behind me Haschayhogan with his blue wand opens the way. They go out, returning with me. Among the many trails that lead toward my lodge—in the middle of my broad field, beautified with the white corn, the yellow corn, the round corn, all kinds of corn, beautified with the pollen of the corn, with grasshoppers, Haschayalthe with his white wand opens the way, before me Haschayhogan with his blue wand opens the way. They return upon it with me. In the entry of my lodge made of daylight, they go in returning with me. At the edge of my lodge, beside the fireplace, through the middle of my lodge, toward the back of my lodge, Haschayalthe opens the way for me. He sits down before me, I sit down after him. Behind me Haschayhogan opens the way for me. He sits down after me. They sit down with me on the floor of my lodge, where my feet are lying, where my limbs are, where my body is; where my mind is, where the dust of my feet is, where my saliva is, where my hair is lying. To my feet I have returned, to my limbs I have returned, etc. My feet are restored to me, my limbs are restored to me, my mind is restored, the dust of my feet, my saliva, and my hair. The world before me is restored in beauty, the world behind me is restored, the world below me is restored, the world above me—all things around me are restored; it is restored in beauty, it is restored in beauty, it is restored in beauty, it is restored in beauty.

*Collections of State Historical Society of Wisconsin.* Vol. XI. Edited and annotated by Reuben G. Thwaites, corresponding secretary of the society.

This is the first volume issued under the care of the new corresponding secretary. It shows that a vigorous hand has taken hold of the work which our beloved and revered friend, Mr. Lyman Draper, has dropped. Mr. Draper has laid the foundation and Mr. Thwaites builds thereupon; both are master-builders. The volume contains 548 pages, thirty-five of them taken up by the index. The frontispiece is a portrait of Alexander Mitchell. The first article is a sketch of Jean Nicolle, interpreter and voyager in Canada in 1618 and 1642, translated from the French of Henri Jonan. Another article is entitled Radisson and Grosseilliers in Wisconsin, followed by Gautier's journal of a visit to the Mississippi in 1778 and 1788. Next, a narrative of Andrew Vieau, the first Indian trader at Milwaukee, and a letter from Nicholas Boilvin, Indian agent at Prairie-du-Chien in 1811, and the Dixon and Grignon papers in 1812 and 1813. These throw light upon the local history of the different parts of the state during the days of fur-traders and first forts. The letters of Joseph M. Street, and the narrative of Morgan L. Martin, of Green Bay, bring down the history to the early settlement by the whites, 1827-1845. This is followed by a sketch by Elisha W. Keyes, on Early Days, 1837-1847. The secretary has an interesting article on the boundaries of Wisconsin, which is illustrated, and which brings before the eye the history of the geography of the state.







**AN ESKIMO HOUSE WITH APARTMENTS.**

THE  
*American Antiquarian.*

---

VOL. X.

NOVEMBER, 1888.

No. 6.

---

HOUSES AND HOUSE-LIFE AMONG THE PRE-  
7 HISTORIC RACES.

*Part 20.*

The subject of house-life is an interesting one, whether it is found in the historic or prehistoric races; for it brings before us a picture which is not only familiar but real. Nothing is more suggestive of the life of the people, and nothing better reveals the actual state of the times than this. If we can get an inside view of the homes of any people we may conclude that we have a good knowledge of what kind of people they are. 1. House-life not only brings before us the condition of society, but makes known whether society was divided into families, into clans, or into any other groups. It other words, it reveals what was the real unit of society. 2. House-life brings before us more or less of the history of the people. If we take the ground that there has been a progress from the lower stages to the higher with all people then we only need to look at the condition of the house and home to know through what stages the people have already passed. 3. House-life also throws light upon the question of race and religion. It is not always the case to be sure that we can determine to what race a people belongs by looking at its homes, and yet there is much in the style of the buildings and in the internal arrangements which suggests the nationality, or race, to which the occupants belong. If this is the case in civilized countries, it is much more so in the uncivilized countries. 4. The religion of the people is also made known by the home. In idolatrous countries it is easy to tell the religion of the people by the idols which are common. In countries where idolatry does not prevail the signs are not so apparent, and yet there will be many things in the house which, to the observing eye, will reveal the faith of the household. This is as true of

the prehistoric as of the historic races. 5. House-life furnishes an index by which we can learn the degree of civilization which prevails. By this we can learn the condition of art and of letters and ascertain the real status of the people, as regards civilization and social progress. The condition of woman and the character of the children will be seen in the home more than anywhere else, and even the disposition of the men and their modes of life will be unconsciously brought out by the house or some of its surroundings.

The question arises, however, if house-life is so suggestive, how can we ascertain what it was during prehistoric times? Our answer to this question is that the chief means is by studying architecture, and especially that form of architecture which was embodied in houses. The American continent furnishes a most favorable field for this line of study. There are here so many different specimens of house architecture, and these specimens are so distributed in the different geographical districts and so correlated to the occupations, social conditions, modes of life and means of subsistence, and other peculiarities of the people, that we have only to look at these structures to ascertain much concerning the prehistoric times. The study of the monuments brings us to this conclusion.

If one can ascertain the character of a people by looking into their homes, and may always find that the house presents a true picture of what the people are, then the importance of the knowledge of the house architecture of the prehistoric races will be understood. We therefore address ourselves to the subject. We are to study the houses and the house interiors of the American races, with a view of ascertaining from them what were the habits and ways of prehistoric peoples. Our effort will be, first, to ascertain whether the employments and modes of life are indicated or represented by this class of structures; second, to learn whether the stages of progress are indicated by the house-life; third, to examine into the social organization and to see whether the house is in any way an exponent of the clan system.

In reference to the first point, that 'is the employment, it will probably be acknowledged that in a general way the house and house-life are so correlated to it that we may ascertain the one from the other. We may need, to be sure, to examine the surroundings, look, not only to the debris of the camps and at the weapons and implements which may be associated with the place, but also the locality and all the surroundings to ascertain the employment; and yet we may regard the house as the best representative, a better exponent than all. In reference to the second point, the grade of society or stage of progress, it is not always true that the house is a clear index, and yet, if we take the house in its geographical location and with those things

which may be regarded as its contents, and consider that all are correlated, we shall be able to ascertain the exact condition of the people. In reference to the third point the task will be more difficult. It is an unsolved problem whether the primitive races lived in the communistic style and whether the clan system was universal. The size of the house and the internal arrangements have generally been regarded as indices of these, and yet it requires a very close analysis and careful study to ascertain the real facts. We shall take the house as the basis of information and seek to ascertain from this what was the real condition of the people. We have already shown that primitive society was divided into different grades, the grades varying according to their employment. The fishermen represent the lowest grade; the hunters that which is next higher; agriculturists that which is still higher; villagers the next higher grade, and the dwellers in cities the highest of all. This may seem like an arbitrary division and yet it is carried out by the facts in the case. In America we find occupations so correlated, and the grades of society so marked by the houses that there is no difficulty in distinguishing them. They are, to be sure, divided by geographical lines and are so arranged in the different belts of latitude that we can almost tell before hand what to expect. The fishermen as a general thing are in the colder regions; the hunters in the regions farther south; agriculturists still farther south; and the civilized races in the torrid regions; so that all that we have to do is to consider the geographical locality and we may at once know what the grade of society was and the employment, the means of subsistence and the general condition of the people, and the problem seems to be an easy one, yet in reference to the communistic system and some other points we find ourselves frequently baffled. We are to bear these points in mind especially, as we consider the houses which are found in the different parts of the continent. If we find what the typical structure was for each of the employments, and what kind of a house was associated with each grade, we are still to ask about the clan system, the communistic state, the social organization, the marriage rites, and those other questions which come up in connection with the home or house-life.

I. We begin then with the houses of fishermen, especially those which are found in the frozen regions of the north. 1. We are to consider these as the typical structures, for a certain grade of society during the prehistoric age. We maintain that we have in the hut of the Eskimo a type not only of the rudest and most primitive, but the earliest form of house. We now find these huts on the border between the ice-fields and the water-plain marking a sort of bank between the habitable and the uninhabitable; but in prehistoric times the line was much farther south and we may imagine that this kind of hut then was built on the

edge of that great glacial moraine whose folds stretch from the Atlantic to the Pacific in the latitude of  $37^{\circ}$  and from that to  $45^{\circ}$ . This is our first epoch of house-building. Another point is noticeable. The house of the northern fishermen is the structure which intervenes between the cave-dwelling and the later habitation. As in Europe the dolmen and cromlech and lake dwellings are supposed to mark the line between the cave and the architectural structures, so these fishermen's huts mark the line in America. We here call attention to the remarks which Mr. William A. Dall has made about the houses and huts of Alaska. He has described the different stages of progress which may have taken place before the beginning of house-building. These stages he ascertained by the study of the relics and remains which he discovered at different depths in the shell-heaps. He thinks that the means of subsistence, the mode of life, the style of habitation were correlated. He divides the epoch of human occupation into three or four different periods. First is what he calls the littoral period,\* a period in which men built no huts and did not even occupy caves, but were mere squatters, so to speak. They were so rude that they merely covered themselves with a temporary structure of drift-wood and straw, something as the inhabitants of California shield themselves by huts of brush-work. This hardly seems possible, for in such a climate as Alaska no human being could have lived without protection. Mr. Dall found caves in this region, though he thinks the caves were only temporary habitations of hunters, and not of the fishermen. It is probable that we shall not find out what was the habitation of man during this period and yet it would seem as if caves were the habitations then as well as during the fishing period. Mr. Dall says that the stratum in the shell-heaps which marked the fishing period differed from the preceding by the appearance of a few rude net sinkers, chipped stone knives, bone darts, and hand lances, and by quantities of fish-bones and says the fishing period was represented by the fish-bone layer, but that the littoral period was marked by the layer of echinus shell. He says "the total absence of awls, bodkins, knives, needles, buttons, or of any bone utensil which might be used in making clothes leads to the conclusion that the people did not wear clothing." He says "there were no lamps, no baking stones, no hearths," so he concludes that this ancient people were not in the habit of using fire. According to this the ancient man in America must have been a very strange kind of creature. It seems much more satisfactory to take the cave-dweller of Europe as the representative of the littoral period

---

\*Mr. Morgan makes natural subsistence upon fruits and roots an evidence of the earliest stage, but assigns the inhabitants to a tropical or subtropical climate. Fish subsistence was correlated to the middle stage of savagery. Outside of the great fish areas cannibalism became the dire resort of mankind. The littoral period we consider arbitrary, yet suggestive.

and the hut-builder as the representative of the fishing period. We strike upon these solid facts when we reach the fishing period. This period is marked by the use of fire, by the manufacturing of clothing, and by the erection of rude huts or houses. Here then we have the order of succession. In Europe we have gravel beds the first, cave-dwellings the second, lake-dwellings the third, stone monuments the fourth, but in America the littoral period, the fishing period, the hunting period, the agricultural period. We put the beginning of house-building in the second or fishing period, and assign the cave-dwelling to the so-called littoral period. The Eskimo's hut is perhaps a good representative of the first constructed house.

This type of house is found among fishermen in all parts of the continent, though it may not always be constructed of ice-blocks or attended with the same underground entrance, yet as a style it is common. It is very remarkable that the dolmens and cromlechs of Europe have retained some of the features of this earliest kind of house. They have the long entrance to the inner chamber and were generally covered with the hemispherical mound resembling the Eskimo hut.

It is supposed that the graves of Europe were frequently imitative of the houses, the urn huts being imitative of the lake dwellings, and the dolmens imitative of the fisherman's house. This same prevalence of early types of houses may be seen in America. It is very remarkable at least that the huts or houses of the tribes which occupied the shores of the great lakes were generally hemispherical,\* as were the houses of the Eskimo. They were to be sure covered with bark, which was laid upon a framework of poles, and not of ice-blocks; but we connect the shape with the employment. It is also well known that in America the hunter tribes generally constructed houses made from a frame-work of poles, which were covered either with bark or matting or skins; but it is remarkable that the hunter's tent or wigwam was almost always in the shape of a cone, the poles being tied together at the top very much as a number of muskets would be stacked, and the covering placed upon the poles. We here give the cut illustrative of these two styles of dwellings. See Fig. 1. The one is the hut of the Chippewa tribe, the other of the Algonquins. In the cut may be seen the earliest form of structures erected by the white man, the old-fashioned wind-mill; and the difference between the native inhabitants and that which was introduced from Europe, especially France, may be recognized.

---

\*Mr. Morgan says: "At the time of their discovery—1641—the Ojibwas were seated at the rapids on the outlet of Lake Superior. Their position possessed advantages for a fish and game subsistence, which, as they did not cultivate maize and plants, was their main reliance. The Ojibwas and Ottawas and Pottowottomies are divisions of the original tribe. Their home was originally upon the shores of Lake Superior. All of these tribes have the same kind of tent."

2. It would seem that we have the typical structures of the first stage of society, and that the earliest people who undertook to build houses at all must have dwelt in huts like these. This

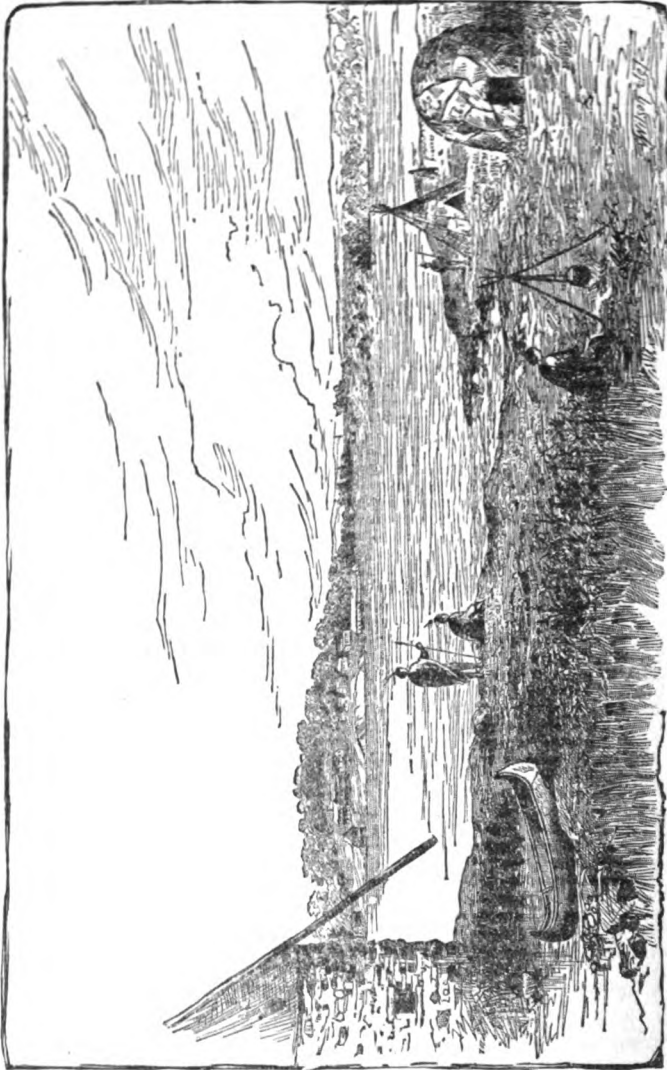


FIG. 1.—HUTS OF FISHERMEN AND OF HUNTERS AT SAULT-ST. MARIE.

thought is confirmed by the investigations into the kitchen middens or shell-heaps. Mr. Paul Schumacher has described the kitchen middens on the coast of Oregon, and speaks of the sunken rings or depressions in the shell-heaps as if they were

an indication of the kind of houses that were occupied by the fishermen. He imagines that they were conical or hemispherical houses covered with earth. The age of these kitchen middens is unknown, but it does not matter. In Denmark and Sweden the kitchen middens are supposed to be of an ancient date, though it is uncertain whether they preceded the age of the palafittes or lake dwellings, or not. The round shape of the lake dwellings is noticeable, a shape which is not confined to the kitchen middens. We are carried back then to the primitive people and to the earliest age by this kind of structure and yet it is not merely true that the fishing period is represented by it. We go to the most primitive people in all lands and find the hemispherical hut. In Africa it is the commonest structure of all. In this respect Rev. J. G. Wood says "that the Africans, especially the Zulus, have no idea of a house, otherwise than as a circular hut. A house with angles to it is the most inconvenient structure possible for them. They do not know what to do with the corners, and in fact have no ability to make corners. If they undertake to draw a straight line so as to make a square, they will get the angles wrong and sides unequal. A circle comes to them as natural as a cell to a bee. Whether the change from the savage to the civilized state seems to have an effect upon the instincts of man, we find this to be true, that the circle changes to a square. It is very remarkable that the mound-builders, especially those in the agricultural state, have both the square and the circle as the models for their village enclosures.

It is interesting to notice that houses resembling this hut are found wherever there is a low grade of society, whether in Africa or America, whether in historic or prehistoric times. They are not confined to fishermen nor are they found only in the Arctic regions, but they seem to be wide spread. They are found in California as well as on the banks of Lake Superior, in the midst of the sand plains as well as upon the ice-fields. See Fig. 2.

Mr. Powers says: "The round, dome-shaped, earth-covered lodge is considered the characteristic one of California, and probably two thirds of its immense aboriginal population lived in dwellings of this description."\* The door-way is sometimes on the top and sometimes directly on the ground at one side. "In the snow-belt of the Coast range and the Sierras the roof must necessarily be much sharper than on the lowlands; hence roof and frame became united in a conical shape, the material being poles or enormous slabs of bark. See Fig. 3. In the very highest regions of the Sierras where the snow falls to such an enormous depth that the fire will be blotted out and the whole open side snowed up, the dwelling retains substantially the same form and

---

\*See Vol. IV, p. 106, Con. to Amer. Eth.



materials; but the fire is taken into the middle of it and one side of it slopes down more nearly horizontal and terminates in a covered way about three feet high and twice as long."

Mr. Powers uses the terms "valley-style or dome-shaped, and



FIG. 2—HUTS OF CALIFORNIA INDIANS.

mountain-style and conical-shaped, to designate the different kinds of lodges," and his generalizations seem to be correct. Still it is a question whether the shape of a lodge or house was not, among all aboriginal tribes, indicative of the previous history, condition and employment of the people.

3. As to the question whether the communistic system prevailed among the fishermen and the hunters alike, this arrangement of the interior proves nothing. The size of the house might be used as an argument, but we must consider that polygamy prevailed and it would require a large house to accommodate a family with several wives and numerous children. We would call attention to the cuts from Catlin's work to show that the Mandans dwelt in families and not in clans. The platforms with a central fire were common among the Chippewas on Lake Superior and among the Iroquois of New York State, as well as among the Eskimos. According to Parkman the Iroquois placed their platform some four feet above the ground, and slept both above and below the platform. These constituted a sort of berth, something like the berth of a cabin. We must consider them as mere matters of convenience, which were common in cold countries, giving warmth to the inhabitants, as well as room in the habitation. Of course the number of fires in the house would indicate the number of families, and where there were several we might suppose the communistic system to prevail. In the Eskimo hut, however, there was but one fire. If the Iroquois house contained a clan, there is no reason to suppose that the Eskimo house did. Eskimo huts were generally arranged in clusters, and we can not help thinking that the clusters were arranged so as to make villages, and the village embraced the clan, leaving the house for the family or for the household, that is a family with its immediate relatives. The same was true with the savages who were hunters; and of the Africans who were agriculturists, or herdsmen; they all arranged their houses in clusters, and it seems probable that the clan-life was embodied in the village rather than in the house.

II. We turn now to the houses of hunters. 1. The question arises whether there was any typical structure for the hunting period. We have spoken of the conical hut as distinguished from the hemispherical hut, and have suggested that it was typical of the hunter state. This is the point we are considering. The cone was certainly used by many of the hunter tribes. It was not only among the Algonquins, but the Dakotas and other wandering races. There was a reason, however, for this. The conical tent was easily taken down and transported. There are many descriptions of the ease with which these tents were removed. The covering was stripped off, the poles separated and then placed on either side of the dogs or ponies which were owned by the family or clan; the covering was placed upon the poles, the furniture upon the covering, and the young children upon the furniture. In this way a whole village could be removed in an incredibly short time. The tent which before served as a house now served as a vehicle. It was a mover's wagon which had no wheels, but served the purpose

very well. It is remarkable that the Sibley tent, which was used by our army when marching, and is still used on the frontier, was modeled after the Dakota wigwam. The conical tent or house was very common, and its use was very widespread. We do not regard it as necessarily connected with the hunter stage and yet it may be a good representative. There is no doubt but that the hunters occupied a grade of society which was in advance of that of the fishermen. Their relics would indicate this. Both were in the stone age, but there were different degrees or periods in this age. The use of pottery and of polished stone axes has generally been regarded as a dividing line. Hunters used these; fishermen did not, or if they did they were not as common among them as among the hunters.

The hunter life may be recognized by the shape of the house as well as by the character of the implements. In looking through the series of Catlin's paintings we find the conical hut among the Comanches, the Crows, the Dacotahs or Sioux, and the semi-conical among the Mandans; these were all hunters. Parkman says the Algonquins used the conical hut. It was the typical house for all that region which intervened between the Ohio River and the Great Lakes, and which extended out across the prairies as far as the Staked Plain and New Mexico. It is associated with hunter life, but is more common in the prairie region than in the forests. The wild hunter tribes, who were always on the move, would naturally prefer such a house, for it could easily be taken down and was best adapted to the hunter's life. It was the habitation which was common on the prairies, especially among the Dacotahs.

2. We are next to inquire whether the house architecture of the hunter is an index of their social grade. As to this some would take the position that the form of the lodge was owing to the climate and to the surroundings rather than to the mode of life. Mr. Stephen Powers, in speaking of the California tribes, enumerates several varieties of the lodge constructed by these tribes, and adapted to the different climates of the state. One form was adapted to the raw and foggy climate of the California coast, constructed of redwood poles over an excavated pit; another to the snow-belt of the Coast Range and of the Sierras; another to the warm coast valleys; another, limited to a small area, constructed of interlaced willow poles, the interstices being open; another to the woodless plains of the Sacramento and the San Joaquin, dome-shaped and covered with earth; and another to the hot and nearly rainless region of the Kern and Tulare valleys, made of tule.\*

Stephen Powers speaks of the style of lodge sometimes seen among the Hupas, a tribe on the lower Trinity, in Northern Cal-

---

\*See Contributions to American Ethnology, Vol. IV.

ifornia, as follows: "A circular cellar three or four feet deep and twelve feet wide, was dug and the side walled up with stone. Around this cellar, at a distance of a few feet from the edge of it, was erected a stone wall on the surface of the earth. On this wall there leaned up poles, puncheons, and broad sheets of red-wood bark. Sometimes this stone wall, instead of being on the inside of the stone wall, was on the outside on the ends of the poles and served to steady them. In the center of the cellar is a five-sided fire-pit, walled with stone, as in the common square cabin; this cellar is both dining room and dormitory; a man lying with his head to the wall has his feet in comfortable position for toasting before the fire; under his head or neck is a wooden pillow, something like that described by travelers among the Japanese. See *Con. to Amer. Eth.*, Vol. III., p. 74. Here then we have the convenience of construction to be the motive



*Fig. 3.—A House Common Among the Sierras.*

for the style, rather than the mode of life or history of the people; still we should say that the lodge was an indication of the stage of culture reached by the people; as the more advanced people were able to overcome difficulties and make the construction conform to their ideas, while those in the lower grades would consult only ease and convenience. As a general rule we should say that while there are no hard and fast lines by which we can tell whether a house belonged to a hunter tribe or not, yet the tendency with those who are sedentary in their habits was to erect the hemispherical cabins; but with the nomadic races the tendency was to use the conical tent. This could be easily taken down and moved; but the dome-shaped hut, especially if it was covered with sod or thatched, could only be left to rot down or be destroyed.

Mr. Powers suggests that the mountaineers drew their models from nature herself; the yellow pine, which furnishes the model for the Gothic style of the temple, may have furnished also the model for the primitive house of the people. The pine does indeed shed the snow because of its conical shape, and Gothic houses are common where snow is abundant. So far we think Mr. Powers is correct. Still it is uncertain whether the one was borrowed from the other. There are Swiss houses among the mountain peaks of the Alps which have sharp roofs, and the two seem to go together, making the landscape unique and beautiful.

We acknowledge the force of these suggestions and yet the grades of society were probably effected by the local surroundings; and in a general way we may consider the mountaineers and inhabitants of the valley as in the same grade with the hunters on the prairies; all having reached the last stage of savagery, or the earliest stage of barbarism.

3. The most important point in reference to the hunter's house is whether the communistic system is indicated by it. We shall need to examine the interiors of the house to ascertain this.

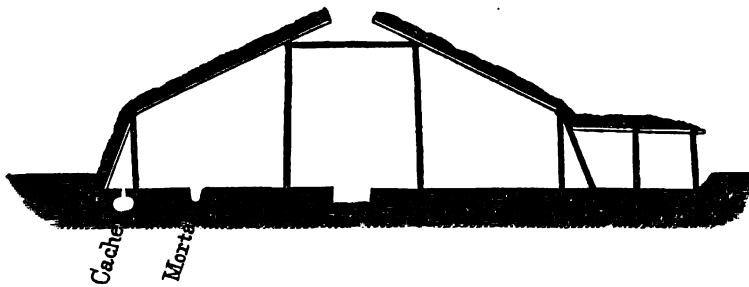
In reference to the internal arrangement of the house, the hunters seem to differ from the fishermen. According to Catlin the hunters generally divided the house into small sleeping apartments, protected by hangings of robes or skins with the robes or furs on the ground for sleeping upon, with a post in front on which hung the arms and implements of the warriors. The Eskimos built platforms around the sides for the sleeping apartments, but had no separate divisions. There was an open space in the middle of both huts, but in the hunter's house skins were hung on the posts near the center and the children were gathered in the space around the fire and were entertained with stories. With the fishermen there were no such hangings, but the hut made one apartment.

We give several cuts to illustrate these points. These are taken from Catlin's book, reproduced by the Smithsonian Institution, and kindly loaned us for use. It will be seen that the Comanches arranged their tents in clusters, that they were all of them conical in shape; they do not seem to have observed any particular order in locating them. On the other hand, the Mandans used the truncated cone as the shape after which they modelled. They always arranged their houses around a hollow square and generally placed their "big canoe," as Catlin calls it, in the center. This canoe represented the traditional vessel on which their great ancestor survived the flood. It served to perpetuate the myth as to the creation and first origin of the race, and was an important object in all their feasts and ceremonies.

Sometimes there was a combination of the two types in one



building, the wall being nearly perpendicular, but the roof being conical. This was the case with the Mandan hut. It was a cone and a sphere combined. It was built with a heavy framework, was covered with poles and then with sod or dirt forming the outer covering, thus making it warm in winter and cool in summer. The following is the mode of construction: Twelve posts are set in the ground at equal distances on a circle, string pieces rest in the forks at the top of the posts, braces are sunk in the ground which slant upward to the top of the wall; slabs of wood are set in the spaces between the braces, resting against the stringers, (see Fig. 4.) surrounding the lodge with a wooden wall; four round posts are set in the ground near the center of the floor, ten to fifteen feet high, ten feet apart; string pieces are placed upon the tops of these; poles are placed as rafters on these stringers; these poles are covered with willow matting, upon which prairie grass was over spread and over all a deep covering of earth; an opening was left in the center of the roof for the exit of the smoke, there was but one entrance, protected by what



*Fig. 4—Plan of Mandan House.*

has been called the "Eskimo doorway," that is, by a passage five feet wide, ten or twelve feet long and six feet high; each house was divided into compartments by screens of matting or skins suspended from the rafters; these compartments opened toward the central fire, having a central area around the fire-pit, which was the gathering place of the inmates.

III. We are next to take up the houses of the agricultural races. We are brought back from our wanderings among the mountains of California and among the prairies of the west to the regions south of the Great Lakes adjoining the Atlantic coast and the Gulf States. This was the region occupied by the agricultural people in prehistoric times. "We begin with the houses of the Iroquois. Mr. L. H. Morgan has furnished a description of these, though his description differs from that of Mr. Parkman. The Iroquois house was undoubtedly very much like that of the Powhattan tribe in Virginia. This has been pictured by the painter Wyeth, and we know exactly how it was built. It was a house, according to Mr. Parkman, whose roof

was bent in the form of a semi-circle with the sides perpendicular; the ends square; the whole structure being rectangular, but being much longer than broad.

Mr. L. H. Morgan has represented them as having an angular, peaked roof, instead of a rounded one. The picture of a palisaded fort and village of the Onondagas contains representations

of the houses of the Iroquois. These are in clusters, but the most of them seem to have rounded rather than peaked roofs. We may conclude then that this was the typical house, among all the agricultural tribes of the Mississippi Valley, both historic and prehistoric; at any rate, it was the structure which was discovered by the early explorers both in Florida, throughout the Gulf States, and as far north as Virginia, North Carolina and Tennessee. It is very probable that it was the structure which prevailed among the Mound-builders of this region. Mr. Morgan's description of the so-called long-house was taken from the Journal of a Voyage to New York, taken in 1676, 200 years ago, by Jasper Dankers and Peter Sluiter, but we regard the picture of the fort taken in the time of Champlain in 1615 as more correctly representing the prehistoric times. The following is the description: "Their

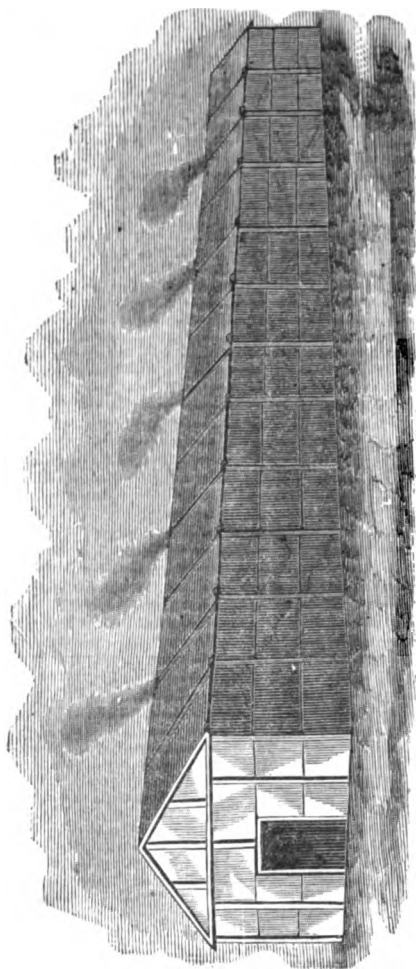


FIG. 6.—Long House of the Iroquois.

house was low and long, sixty feet long, fourteen or fifteen feet wide; the bottom was earth; the sides and roof were made of reed and the bark of chestnut trees; the posts or columns were limbs of trees stuck in the ground and all fastened together; the top or ridge of the roof was open about half a foot wide from one end to the other, in order to let the smoke escape, in place of a chimney; on the sides of the walls of the

house the roof was so low that you could hardly stand under it; the entrance or doors, which were at both ends, were so small and low that they had to stoop down and squeeze themselves in order to get through them; the doors were made of reed or flat bark; in the whole building there was no lime, stone or lead."\*

Mr. Morgan's restoration of the "long house" of the Seneca-Iroquois does not quite correspond with the facts, or at least does not quite represent the typical structure of the agricultural races. The houses of the natives of the South were all of them with bent or semi-circular roofs, and this, we think, was nearer the type of house which was common among the agricultural races. Mr. Morgan's reconstruction of the Mound-builder's house is also faulty. We do not know what that house was; it probably varied with the different tribes and races. In some of the Mound-builders' districts there are circular ridges or rings which show that the lodges were either conical or hemispherical and not rectangular. Such is the case in Tennessee and in Missouri. In the Southern States it is very probable that the Mound-builder's house was rectangular; at least the pyramids had that form and it is probable that the superstructure conformed to the foundation. There are many rectangular platforms among the earthworks of Ohio; these probably had square houses upon them; there are also many circular enclosures in which circular houses must have been the structure which formed the habitation.

In reference to the communistic system, Mr. Morgan, who was the first author who has brought this system to light, maintains that the Iroquois long-house embodied it, but that it was a system which prevailed extensively and was embodied in other houses as well as this. We call attention to Mr. Morgan's description of the house of the Iroquois because it seems to us that there is just enough difference in the houses to disprove this position. The long-house of the Iroquois was from 50 to 80 and sometimes 100 feet long. The interior of the house was compartmented at intervals of six or eight feet, leaving each chamber entirely open like a stall upon the passage way which passed through the center of the house from end to end. At each end was a doorway covered with suspended skins. Between each four apartments, two on a side, was a fire-pit in the center of the hall, used in common by their occupants. Thus a house with five fires would contain twenty apartments and accommodate twenty families, unless some apartments were reserved for storage. Each house, as a rule, was occupied by related families, the mothers and their children belonged to the same gens, while their husbands and the fathers of these children belonged to other gentes; consequently the gens or clan of the mother

---

\*See *Con. to Amer. Eth.* Vol. IV., p. 118.



largely predominated in the household. Whatever was taken in the hunt or raised by cultivation by any member of the household, as has been elsewhere stated, was for the common benefit."\* We must remember, however, that the houses of the Aborigines were not often like the long-house. They were divided into compartments, but the majority of them were much smaller and would accommodate fewer people. We have maintained that it was the village enclosure which accommodated the clan and that the communistic system embodied itself in the village, but that the house was built for the family and not for the clan. Without denying what has been said about the Iroquois we hold that the Indians generally had their families and immediate relatives in the house very much as white people, but that they made their villages the abode of the families that were related, in other words, the home of the clan. All that Mr. Morgan has said about the obligations and privileges of the clan we believe to be true, but the hospitality of the family would be accounted for by the clan system. One family could borrow from another in the village, and the clan system would make it an obligation to lend or give; but this does not prove that every house contained a clan or that every family in the clan had an absolute right to what the rest had. The communistic system did not necessarily extend through the whole village; the family may have had all things in common, but this does not prove that the clan did. This is an important distinction. The house accommodated the family, and all things may have been common to those dwelling in the house, but the village enclosure accommodated the clan and only the land and the public store was the common property of the clan.

Mr. Morgan lays down five heads or elements as peculiar to communism—the law of hospitality, communism in living, the owning of lands in common, the practice of having but one meal prepared a day, a separation at meals, the men eating first, and the women and children afterwards. All of these elements were embodied in the family, but it is doubtful whether they were common except among the Iroquois and among the pueblo tribes of the West; and there is some uncertainty in our mind that even as to the Iroquois themselves. We acknowledge that there was a communistic system and that communistic life in some of its features was practiced among the agricultural races; but we can hardly believe that it was so universal and so pervasive as Mr. Morgan makes it out to be.

IV. We now turn to the houses of the village Indians. Here the communistic life reached its height. If we would study the system we must look to these pueblos, for they embodied it with the greatest perfection. The pueblos were un-

---

\*Con. Amer. Eth., Vol. IV., p. 121.



**A CAVE VILLAGE IN CANYON DE CHELLIEY.**

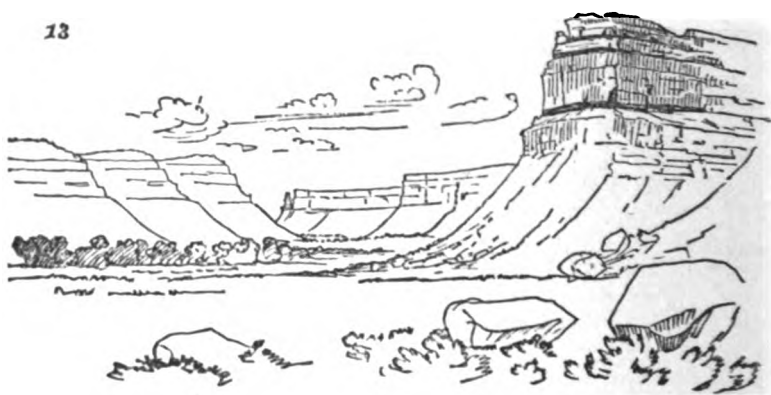
1.—Ground Plan; a, Two-story House of Chief; b, Reservoir; c, Bath; d, Store Houses and Court. 2.—The Cliff, Stream and Location of the Village. 3.—Extension of the Village with Corrals and Ruined Houses.



doubtedly communal houses. They seem to be in great contrast with all others. They are not built separately, but seem to have been built in great blocks; a single block containing many tenements and running up to several stories in height. The many-storied or terraced pueblo is the typical structure for village Indians. How this type came to be introduced is a question. There is a mystery about it. It is certainly a remarkable style of building and there are no steps by which we can trace a development of architecture from a lower stage to this. There are, however, three principles which may to a certain degree account for the style of architecture. In the first place, the house was made the abode of a clan or tribe, the communistic system having found its complete development in this. In the second place it was erected as a defense and like the old block-houses of the times of the French and Indians war was made more than one story high; the lower story being closed against an enemy and the upper story serving as a place of attack. The third point is that the pueblo was erected in the place where the population was necessarily gathered into the center, the system of irrigation requiring a combination. The water was drawn from a running stream, taken at a point above the pueblo, carried down through a series of garden-beds, and the people used it and cultivated the ground together; this made the residence of the people compact.

Mr. Morgan says: "These houses represent together an original indigenous architecture, which with its diversity sprang out of their necessities." "Its fundamental communal type is found not less clearly in the houses about to be described in the so-called palace of Palenque, than the long-house of the Iroquois." The degree of their advancement is more conspicuously shown in this house architecture. Each pueblo was an independent organization under a council of chiefs, except as several contiguous pueblos, speaking dialects of the same language, were confederated for mutual protection. "Throughout all these regions there was one connected system of house architecture as there was substantially one mode of life." Mr. Morgan also speaks of the defensive character of these pueblos. He says:

"The pueblos now in ruins throughout the original area of New Mexico, and for some distance north of it, testify to the perpetual struggle of the former to maintain their ground as well as to prove the insecurity in which they lived." The Indians north of New Mexico did not construct their houses more than one story high, or of more durable materials than poles covered with matting or bark or coated over with earth. A stockade around their houses was their principal protection. In New Mexico going southward they are met for the first time. That the means of subsistence required a compact settlement will be evident to any one who examines the country, and thus



**CLIFF DWELLINGS AND THEIR SURROUNDINGS.**

comes to understand the necessities of the case. Village life found its complete development in this region, as irrigation required a combination of effort and favored residence in villages. The village, however, became so compact that it was at times embodied in a single pueblo or terraced building. There were, however, many villages which contained several pueblo houses. The village of Zuni, which is of modern date, has a large number of these pueblo houses. As to the situation of these villages some have supposed that they were originally placed upon the mesas or inaccessible cliffs; and that those which are found in the valleys are of a modern origin. Mr. Mendelieff, who has explored and surveyed many of them, is of the opinion that there were three eras or epochs; that in the earliest period they were located on the bottom lands in the canons, later were moved to the mesas for defense, and then at a modern date were moved back again to the valleys.

The pueblos have been compared to the cliff dwellings, as the same cause which will account for the pueblos being upon the mesas, may account for the cliff dwellings being in the sides of the cliffs; namely, to escape danger. At an early period in history there was a prolonged attack upon the people, and there was no other way of escape than to build their houses in the sides of the cliffs. In studying the cliff dwellings we find that the same elements were combined in these that were in the pueblos. There was the same communistic system embodied in them, notwithstanding the difficulties of the case. There was also the same means of subsistence, but the element of defense was the one which ruled.

We can realize something of the fear of the people from the height at which their houses were placed, some of them being a thousand feet above the valley and hanging like bird's-nests amid the crevices. The communal system was here subordinate to the desire for defense, and yet it was continued, clans and families making their retreat in these fastnesses. All the elements of village life were embodied, notwithstanding the inconvenient situation in which the village was placed. If we can imagine a pueblo to be taken up bodily and dashed against the side of an immense precipice, the rooms thrust into the niches and caves, but the walls scattered and built among the shelters, we will have a picture of the cliff-dwellings; for all of the rooms, including the dwelling, the store-houses, the estufas or "sweat-houses," are found in these cliffs or caves, the terraces and outside walls only being absent. Frequently the order was reversed, for the store-houses were above the dwellings and the estufas were above the store-houses; each being reached in turn by steps which were cut in the side of the rock. If we imagine the side of the precipice to answer for the wall of the pueblo, the steps in the rock to answer for the ladder, the cave floor to answer for the terrace, and the sides of the caves to

answer for the division walls, we have the pueblo restored. There were many of these caves in which there were springs or fountains, and it is supposed that all the conveniences of domestic life were secured in these strange retreats; social and domestic life were thus provided for in the caves. Where a village could not be accommodated the people made a virtue of necessity and placed their families in one niche, their stores in another, and their places of assembly or estufas in another. There were breast-works or walls on the edge of the cliff to keep the inmates from falling, and so children were safe. For subsistence they either passed down the sides of the cliff to the garden patches below, or climbed up to the fields, which were scarce, on the mesas above; possibly a combination of the two brought a living to the people. That the cliff-dwellings and pueblos were built on the same general plan and by the same class of people is evident. The pueblos are frequently seen on the top of the rocks or isolated mesas, the buildings arising in different stories above the cliffs, but sheep enclosures and garden patches being placed on the benches below the cliffs. In some of these the whole cliff or mesa seems to be terraced, the rock itself with its terraces or benches forming a model for the buildings above.

As to the style of building these pueblos there seems to be a difference of opinion. Mr. L. H. Morgan, H. H. Bancroft, W. H. Jackson, Lieut. J. C. Ives, and Gen. J. H. Simpson have all described the pueblos, and the most of them imagine that the walls were perpendicular upon one side and in terraces upon the other; the terrace being regular so as to make a connected platform along the whole front. Other authors who have examined the buildings more recently maintain that they were built in successive stories, but that the platforms or terraces were at different levels and frequently faced away from the court as well as toward the court, in fact extended around the four sides.

Gen. Simpson was the first one to discover the pueblos. His report contains an account of the most important. Lieut. Ives says: "Each pueblo is built around a rectangular court, in which, we suppose, are the springs that furnish the supplies to the reservoirs. The exterior walls, which are of stone, have no openings, and would have to be scaled or battered down before access could be gained to the interior. The successive stories are set back one behind the other. The lower rooms are reached through trap-doors from the first landing. The houses are three rooms deep and open upon the interior court. The arrangement is as strong and compact as could well be devised, but as the court is common and the landings are separated by no partitions it involves a certain community of residence." A restoration of the pueblo of Hungopavie made by Mr. Kern, who accompanied Gen. Simpson as draughtsman, will give an





**TWO-STORIED CLIFF DWELLINGS ON THE SAN JUAN.**





idea of the manner in which the pueblos were built. Mr. Morgan says: "We may recognize in this edifice a very satisfactory reproduction of the palaces of Montezuma, which like this were constructed on three sides of a court and in the terraced form." Lieut. Simpson, in his report, has furnished ground plans of five of these structures with measurements. They are all constructed of the same material and upon the same general plan. They contain from 100 to 600 apartments each, and would severally accommodate from 500 to 4,000 persons. Lieut. Simpson, speaking of the pueblo of Pintado, says: "Forming one structure, and built of tabular pieces of hard, fine-grained, compact, gray sand-stone, (a material entirely unknown in the present architecture of New Mexico) to which the atmosphere has imparted a reddish tinge, the layers or beds being not thicker than three inches, and sometimes as thin as one-fourth of an inch, it discovers in the masonry a combination of science and art which can only be referred to a higher stage of civilization and refinement than is discoverable in the works of Mexicans or Pueblos of the present day." The thickness of the main wall at the base is about three feet; higher up it is less, diminishing every story by retreating jogs on the inside, from bottom to top. The series of floors indicate that they must have been originally three stories.

The system of flooring seems to have been large, transverse, unhewn beams, six inches in diameter, laid transversely from wall to wall, then a number of small ones laid longitudinally upon them; brush, bark or slabs placed upon these and covered with a layer of mud mortar. The beams show no signs of the saw or axe. On the contrary, they seem to have been hacked off by some very imperfect instrument. On the ground floor are fifty-four apartments, some of them as small as five feet square, the largest about 12x6 feet. The rooms communicate with each other by very small doors, some of them as contracted as  $2\frac{1}{2} \times 2\frac{1}{2}$  feet; and in the case of the inner suite, doors communicating with the inner court as small as  $3\frac{1}{2} \times 2$  feet. See Fig. 6. The principal rooms, or those most in use, on account of their having larger doors and windows, were probably those of the second story. Lieut. Simpson says: "In the northwest corner of the ruins we found a room in almost a perfect state of preservation. This room was  $14 \times 7\frac{1}{2}$  feet in plan and 10 feet in elevation. It has an outside door  $3\frac{1}{2}$  feet high by  $2\frac{1}{4}$  wide; one at its west end, leading to the adjoining room 2 feet wide.\*

The pueblo Bonito is thus described: Its present elevation shows that it had at least four stories of apartments. The number of rooms on the ground floor is 139, making a reduction of one range of rooms for every story after the first would increase the number to 641. One of the best rooms as shown

---

\*Fig 84, Con. Amer. Eth., Vol. IV., p. 162.

in the engraving, was drawn by Mr. Kern. "It is walled up," says Simpson, "with alternate beds of large and small stones, the regularity of the combination producing a very pleasing effect; the room has a doorway at each end and one at a side; each of them leading into adjacent compartments. The light is let in by a window 2x8 inches, on the north side. The nod-

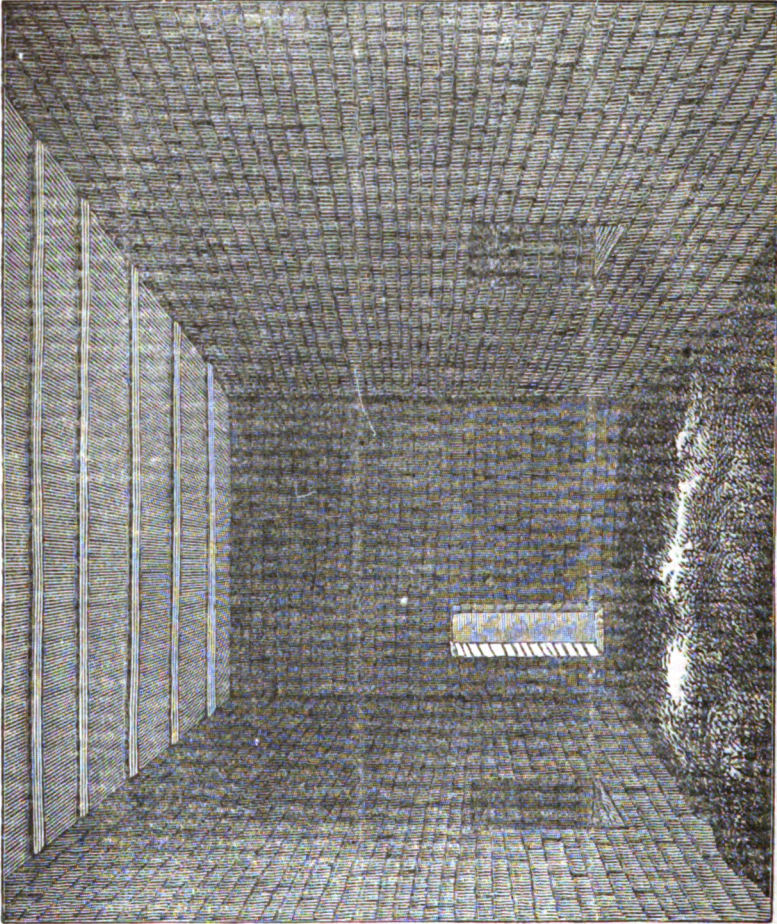
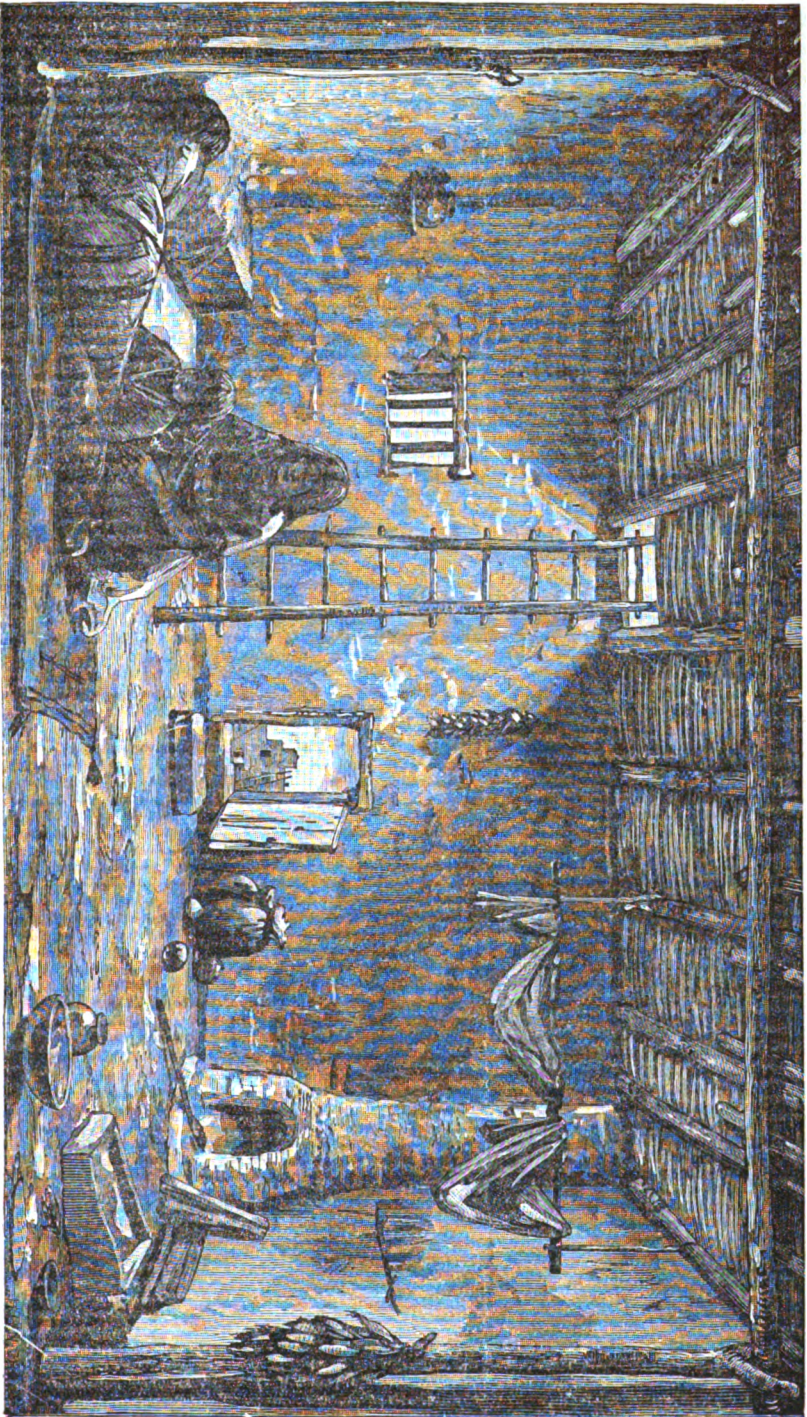


FIG. 6—ROOM IN A PUEBLO.

ern pueblo room differs from this one in that chimneys are erected in them and wider doors open from them. Yet the same general characteristics are retained. See Fig. 7. Mr. John Ward, Indian agent, has given description of these: "No room has more than two windows, very few have more than one. The first story, or the ground rooms, are usually without doors or windows. The only entrance being through the doors



HOUSE INTERIORS OF THE PUEBLOS.



or scuttle hole in the roof, which are within the rooms comprising the story above. The basement rooms are used for store-rooms. Those in the upper story are the rooms mostly inhabited; those located in the front part of the building receive their light through the doors and windows before described; the back windows have no light than that which goes in through the scuttle-holes and the partition walls leading from the front rooms. Some families have as many as four or five rooms, one of which is set apart for cooking, and is furnished with a large fire-place for the purpose. Those who have only two or three rooms usually cook and sleep in the same apartment and in such cases they cook in the fire-place which stands in one corner of the room.\*

In reference to the arrangement of the stories it would seem as if the restorations which have been given, hardly convey the right idea. No pueblo has been discovered which has terraces arranged as regularly as these represent them to be. The most of the photographic pictures of them convey a more correct idea.

In these the pueblo is a pile of buildings, but only portions of the building reach to the fifth story. Mr. Ward says that "there is no regular terrace, no entire circuit can be made around any one of these stories; the only thing that can be called a terrace being the narrow space left in front of some of the rooms from the roofs of the lower rooms."

Lieut. Joseph C. Ives visited Moqui pueblos near the Little Colorado in 1858. They are seven in number, situated upon mesa elevations within an extent of ten miles, difficult of access and constructed of stone. As to the population of these buildings, there seems to be a great diversity of opinion. It will be acknowledged that they were built for the accommodation of large numbers; though we think the numbers have been exaggerated.

Yet Lieut. Ives says: "We came upon a level summit and had the walls of the pueblo on one side and an extensive and beautiful view on the other. The town is nearly square, and surrounded by a stone wall fifteen feet high, the top of which forms a landing extending around the whole of it. The faces of the bluff have been ingeniously converted into terraces; these were faced with neat masonry and contained gardens, each surrounded with a raised edge, so as to retain water upon them. Pipes from reservoirs permitted them to be irrigated at any time."

There are eleven pueblos in the Chaco canon within a distance of nine miles; this would make a population exceed the densest population in civilized countries. The modern pueblo of Zuni contains no less than 12 or 15 pueblo houses. Figuring from the estimates of Mr. Morgan it would contain 16,000

---

\*Fig. 28, Vol. IV., Con. to Amer. Eth., p. 148.

inhabitants, while as a matter of fact it contained only 1,600. We must reduce the number of families in each pueblo to reconcile the estimates with the facts. This does not, however, conflict with the idea that there was a communistic system. Mr. David J. Miller says: "Their government is composed of the following persons: A cacique, or principal sachem, a governor or alcade, a lieutenant governor, war captain, six fiscals or policemen. The cacique has the general control of all officers in the performance of their duties." Mr. Morgan says: "At the time of the discovery the pueblo Indians of New Mexico worshipped the sun as their principal divinity. They had periodic assemblages of the authorities and the people, in the estufas, for offering prayers to the sun, to supplicate him to repeat his diurnal visits, and to continue to make the maize beans and squashes grow for the sustenance of the people." Mr. Jackson describes the estufas: "They are each 25 feet in diameter; the inside walls are perfectly cylindrical, and in the case of the inner one are in good preservation for the height of about five feet. \* \* \* There are no side apertures, so that light and access were probably obtained through the roof. These *estufas* which figure so prominently in these ruins, and in fact in all the ancient ruins extending southward from the basin of Rio San Juan, are so identical in their structure, position, and evident uses with the similar ones in the pueblos now inhabited, that they indisputably connect one with the other, and show this region to have been covered at one time with a numerous population, of which the present inhabitants of the pueblos of Moqui and of New Mexico are either the remnants or the descendants."\*

---

\*Con. to Amer. Eth., Vol. IV., p. 158.

### THE EGYPTIAN SPHINX.

From all antiquity the Egyptian Sphinx has been a riddle that has remained unsolved to our days. It is still, as Bunsen says, the "enigma of history".<sup>1</sup> Osburn asks: "When and by whom was the colossal statue erected, and what was its significance?" adding, "We are accustomed to regard the Sphinx in Egypt as a portrait of the king, and generally indeed for that of a particular king whose features it is said to represent."<sup>2</sup>

Its age is unknown. DeRougé supposes it to be as old as the fourth dynasty,<sup>3</sup> but it is probably coetaneous with, if not anterior to, the pyramids. True, the name of Amasis, whose tomb Plinius believes to it be,<sup>4</sup> has been found conspicuous on the tablet in the temple between the paws: but the names of Thotmes IV., of Rameses II., of Khafra, are likewise inscribed on the base, and Dr. Richard Lepsius very justly remarks<sup>5</sup> "King Khafra was named in the inscription, but it does not seem probable thence to conclude that Khafra first caused the lion to be executed; as another inscription teaches us King Khafra had already seen the monster; or, in other words, says that already before him the statue existed, the work of an older pharaoh."

As to its significance, Clemens of Alexandria<sup>6</sup> simply tells us that it was the emblem of the "union of force with prudence or wisdom;" that is, of physical and intellectual power, supposed attributes of Egyptian kings. Without pretending to emulate *Ædipus* and to offer a solution for the puzzle of so many centuries, we may be permitted to call attention to certain striking analogies existing between the Egyptian Sphinx and the leopard with human head that crowned the mausoleum of Prince Coh at Chichen-Itza (Yucatan). Both these monuments are unique in the countries where found.

In order to better understand these analogies, it will be necessary to consider not only the meaning of the names of the Sphinx, but also its position relatively to the horizon and to the edifices by which it is surrounded.

It is placed exactly in front, and to the east, of the second pyramid, looking over the Nile toward the rising sun. It repre-

<sup>1</sup> Bunsen. *Egypt's Place in Universal History*, Vol. II, p. 388.

<sup>2</sup> Osburn. *Monumental History of Egypt*, Vol. II, p. 319.

<sup>3</sup> DeRougé. *Six Premières Dynasties*, pp. 46-50.

<sup>4</sup> Plinius. *Hist. Nat.*, xxxvi, 17.

<sup>5</sup> Richard Lepsius. *Letters from Egypt, Ethiopia and the Peninsula of Sinal*. Translated by Leonora and Joanna B. Horner. P. 66. London, 1853.

<sup>6</sup> Clemens of Alexandria. *Strom.*, v.

sents a crouching lion with a human head, hewn out of the solid rock. Piazza Smyth<sup>1</sup> tells us that "about the head and face, though nowhere else, there is much of the original statuary surface still, occasionally painted dull red." Red is the color of the American race of man.

According to Henry Brugsch:<sup>2</sup> "To the north of this huge form lay the temple of the goddess Isis; another dedicated to the god Osiris had its place on the southern side; a third temple was dedicated to the Sphinx. The inscription on the stone speaks as follows of these temples. He, the living Hor, king of the upper and lower country, Khufu, he, the dispenser of life, founded a temple to the goddess Isis, the queen of the pyramid; besides the god's house of the Sphinx, northwest from the god's house and the town of Osiris, the lord of the place of the dead."

The Sphinx being thus placed between temples dedicated to Isis and to Osiris by their son Hor, would seem to indicate that the personage represented by it was closely allied to these deities.

Another inscription shows that it was especially consecrated to the god *Ra-Atum*, or the "Sun in the West;" thus connecting said personage with the "Lands toward the Setting Sun," with the "place of the dead," with the country whence came the ancestors of the Egyptians, where they believed they returned after the death of the material body, to appear in the presence of Osiris seated on his throne in the midst of the waters, to be judged by him for their actions while on earth.

Mr. Samuel Birch, in a note in the work of Sir Gardner Wilkinson, "Manners and Customs of the Ancient Egyptians,"<sup>3</sup> says that the Sphinx was called *Ha* or *Akar*, words which mean respectively in the Maya language, "water" and "pond" or "swamp". In these names may we not see a hint that the king represented by the huge statue dwelt in countries surrounded by water, or came over the water? Its position, again, with the head turned toward the East, its back to the West, and to the pyramids, may not be without significance. Might it not mean that he traveled from the West to the East, from the Western Continent—the land of pyramids, par excellence—where Isis was queen—at the head of the ancestors of the Egyptians, when, on account of political or religious dissensions, or for commercial ventures, they abandoned the place of their birth and sallied forth in search of new homes? Was it he who led them across the vast expanse of the ocean to the banks of the Nile where they settled and became the great nation whose civilization spread far and near among the dwellers of the littoral of the Mediter-

<sup>1</sup> Piazza Smyth. *Life and work at the great Pyramid*, vol. 1, p. 823.

<sup>2</sup> Henry Brugsch. *History of Egypt under the Pharaohs*, translated by Henry Danby Seymour, London, 1879; vol. 1, p. 80.

<sup>3</sup> Samuel Birch. Sir Gardner Wilkinson. *Manners and Customs*. Note, vol. III., chap. XIV., p. 310.



ranee? May not that lion or leopard with a human head be the totem of that leader or king? Was it that of some famous personage in the mother country, closely related to said leader, highly venerated by him and his followers, whose memory they wished to perpetuate in the land of their adoption and among the coming generations?

Henry Brugsch again tells us:<sup>1</sup> "The Sphinx is called in the text *Hu*, a word which designates the man-headed lion, while the real name of the god represented by the Sphinx was *Hormakhu*; that is to say, 'Horus on the horizon'." It was also called *Khepra*, "Horus in his resting-place on the horizon where the sun goes to rest."<sup>2</sup>

May not the names be the thread of Ariadne to guide us out of that more than dædalian labyrinth?

Herodotus<sup>3</sup> says that Horus was the last of the gods who governed the Egyptians before the reign of Menes, the first of their terrestrial kings. Horus was the youngest son of Isis and Osiris. He came into the world soon after the death of his father, and stood forth as his avenger, combatting against *Set* and defending his mother from him.

*Hormaku*, according to the Maya language, is a word composed of three primitives—*Hool-ma-ku*, that is, *hool*, "head," "leader;" *ma*, country, or *ma* radical of "Mayax" that becomes syncopated by losing the dēsinence *yax*, and *Ku*, God, be it: "The God chief in Mayax."

That *ma* stands for "Mayax" in this instance there can be no doubt, since the sign  $\neg$ , which is the shape of the peninsula of Yucatan, forms part of the hieroglyph which represents the name of the Sphinx. Had not this been the intended meaning the hierogrammatist would no doubt have made use of some other of the various signs with which they represented our Latin letter M. We must remember that the hierographic writings were in a great manner pictorial.

*Khepra*, according to the Maya, reads *Keb-la*. *Keb* means "to incline," and *la* is the "eternal truth," hence the "eternal God"—the Sun, *Keb-la* or *Khepra*, the "Sun inclined on the horizon."

As to the name *Hu*, used in the text to designate the Sphinx, it may be a contraction of the Maya word *Hul*, an "arrow," a "spear."

The Greeks placed offensive weapons in the hands of some of their gods as symbols of their attributes; so also the Egyptians. They represented Neith, Sati and Khem, holding a bow and arrows; to Horus they gave a spear, *Hul*. With it he was said to have slain *Set*, the murderer of his father. They pictured him, standing in a boat, piercing the head of *Set*, who is swim-

<sup>1</sup> Henry Brugsch. History of Egypt, Vol. I, p. 81.

<sup>2</sup> Same, Vol. II, p. 464.

<sup>3</sup> Herodotus. Lib. II, 144.

ming in the water. This is also represented in the shape of a serpent.

The name of the ancient dynasty of the kings of Mayax, situated in the midst of the western waters, was *Can*, "serpent"; and the country itself was symbolized by its contour, a serpent with an inflated breast, by the Maya hierogrammatists, as was Egypt by the Egyptian scribes.

From the bas-reliefs on the jambs on the door of Prince Coh's funeral chamber at Chichen, where the portraits of his children are sculptured, nearly life-size, we learn that the name of his youngest son, a comely lad of about sixteen years, was *Hul*.

*Hul*, *Hu*, *Hool*, *Hor* are cognate words.

We have endeavored to show elsewhere<sup>1</sup> that "*Seb*" and "*Nut*" and their children, *Osiris*, *Aroeris*, *Set*, *Isis* and *Nike*, worshiped as gods by the Egyptians, were personages who had lived and reigned in Mayax, where, having received the honors of apotheosis after their death, temples had been erected to their memory and divine homage paid to them. That *Osiris* and *Isis* or *Mau* were no other than Prince *Coh* and his sister-wife *Moo*, the queen of Chichen, whose history is repeated, more or less correctly, in the myth of these deities held in such great veneration throughout Egypt, there seems to be no doubt.

After the killing of Prince *Coh* by his brother *Aac*, *Moo*, at the head of her followers, waged war against the murderer to avenge the death of her husband, over whose remains she erected a splendid mausoleum, placing on the top his totem—a leopard with a human head.

The country was for a long time divided into two camps. Fortune at times favored one party; at times the other. At last *Moo*'s adherents were routed. The queen herself fell into the hands of her foe, who ill-treated her in all manner of ways, although she was his own sister, the companion of his childhood. She escaped from him and sought refuge among the populations of the southern parts of the country that still remained faithful to her. *Aac* pursued her thither. Having again defeated her defenders he took possession of the land, and the kingdom became re-united under his sway. Meanwhile *Moo*, having lost her hold even on those parts, fled to the sea coast, then across the sea eastward to the "land of Zinaan" (scorpion), the Antilles of our days.

But let us hear the recital of these events from the author of the *Troano*, MS.,<sup>2</sup> one of the four Maya books that escaped destruction at the hands of the fanatical Spanish friars who destroyed by fire all the ancient American records they could find at the time of the conquest of Yucatan. The reading of

<sup>1</sup> Augustus Le Plongeon. *Sacred Mysteries Among the Mayas and the Quiches* pp. 87 et passim.

<sup>2</sup> *Troano* MS. Second part. Plate xvii, upper compartment.

this account begins at the right hand upper corner. "The people of Maya, being subdued by blows and cowed, not opposing great resistance to him, the master seized her by the hair; and, in common with others, caused her to suffer from blows." This happened on the ninth day of the tenth month of the year Kan, that is on the 7th of the month *yax* of the year *Kan*.

"Being completely routed, she passed to the opposite seacoast toward the east. Seeking refuge, the queen went to the seacoast in the southern parts of the country, that were already wounded." This event took place on the sixth day of the first month of the year Kan, that is, on the sixth *Muluc* of the month *Pop*, or seven months after she was made a prisoner.

In the illustration the country figured by a deer is severed in two. The head and fore parts of the body represent the north, the hindquarters the south. The queen is pictured by her totem, a macaw, painted black—token of disaster, sorrow, mourning; the eye of the bird corresponds to our letter M, and with the crest gives her name *Moo*. She is seen flying toward the land of Zinaan, the image of which, a scorpion, she carries in her beak, having just lost her grasp on the southern part of the country, as indicated by her hanging leg with the claw half open, and the sign Kan, "south," forming the rump of the bird.

"The northern parts of the Mayax being thoroughly cowed he, having vanquished one by one all who had hid her, joined the severed parts and again made the country whole."

This took place on the fourth day of the eighth month, that is on the 1 *manik* of the month *Mol* of the year *Kan*, eight months and twenty-five days after the queen's departure for Zinaan.

The illustration speaks for itself—the artist represents King Aac carrying away the whole country.

The queen not feeling safe in Zinaan, which seems to have been subject to the rulers of Mayax, continued her flight further East, in the hope of reaching the "Land of Mú." She was accompanied by her suite, her adherents and her youngest son *Hul*. Not finding any vestige of the ill-fated Mú, that had sunk and entirely disappeared under the waves of the ocean but a short time before—on the thirteen *chuen* of the month *Zac* in the year *Kan*—(about 7,500 years B. C.), according to the same Maya author, she proceeded onward intent on reaching the Maya settlements already founded in the lands of the Rising Sun.

Did she reach the valley of the Nile and settle on the banks of that river with her followers, thus laying the foundation of the nation of most renown in ancient history? Was it *Moo*, the queen of Chichen, in Mayax, who became *Mau* or *Isis*, the deity adored with such reverence in the temples of Egypt that her worship was superior even to that of Osiris?

Apuleius in his "Metamorphosis"<sup>1</sup> makes her say: "But the sun-illuminated Ethiopians and the Egyptians, renowned for ancient lore, worshiping me with due ceremonies, call me by my real name, Queen Isis." This name may be a dialectical pronunciation of the Maya word *izin* (idzin), the younger sister. And Diodorus causes her to say: "I am Isis, queen of the country, educated by (Thoth) Mercury. What I have decreed no one can annul. I am the eldest daughter of Saturn (Seb) the youngest of the gods. I am the sister and wife of King Osiris. I am the first who taught men the use of corn. I am the mother of Horus."

Was it she who, in order to perpetuate his memory among her followers and their descendants in the land of their adoption, caused the sphinx to be sculptured to the semblance of the leopard with human head—totem of her beloved brother and husband, (*Osil*, the beloved, hence "Osir,") which she had placed on the top of his mausoleum at Chichen? Did she intrust her son *Hul* with the supervision of the execution of the huge statue that for this reason was named *Hu* in the text?

Shall we answer in the negative these queries that force themselves on the mind when we reflect on the similarity of the names, and the striking analogy of the events said to have taken place in the lives and history of *Isis* and *Osiris* and those of Prince *Coh* and Queen *Moo*; particularly when we consider the quasi identity of the ancient hieratic Maya and Egyptian alphabets; that of the rites of initiation into the mysteries celebrated in the temples of Mayax and Egypt, and many other customs and traditions that can not be regarded as mere coincidences?

As in Egypt so at Chichen, there are three principal pyramids located at a short distance from each other, and the sphinx, as well as Prince *Coh*'s mausoleum, with his totem, are placed in front of the second of these monuments in their respective country. Is this also the effect of chance, devoid of significance?

AUSTUS LE PLONGEON, M. D.

---

<sup>1</sup> Apuleius. *Metamorphosis*, Lib. II., 241.

<sup>2</sup> Diodorus. *Bibl. Hist.*, Lib. I., 27.

## METAL ART IN ANCIENT MEXICO.

The description of the gold and silver wrought ornamental work found by the Spaniards in Mexico and Peru has always interested the readers of Prescott and other authors who have written upon the history of these countries. There has arisen, however, a writer who undertakes to controvert all this. An article published in *The Popular Science Monthly* for August, 1887, described the Mexican metal relics in the museums, and makes these out to be very simple and inferior specimens of art. He says: "We have nothing, however, so far as archæological evidence goes, to show that the Mexicans acquired and practiced the art of smelting, refining and alloying before the advent of the Spaniards. I can not agree with many writers in thinking the gold which Cortez saw was the product of so enlightened and difficult an art as smelting." In speaking of the account given by Cortez, Gama and Bernal Diaz, he says "that their statements in this regard are grossly exaggerated is evident from the fact that with the exception of a few small trinkets not a relic of the beautiful things of which they speak remains." As an argument he states that Cortez directed his whole effort not merely to satisfy his own greed for gold, but to meet the expectations of the emperor, to whom he had promised wealth and treasure, and charges him and his secretary, Gomorah, with downright falsehood. He then strangely uses this argument in reference to Bernal Diaz, that his original manuscript slumbered unpublished in private hands after his death and then was printed for the first time in Spain under a censorship by Alonzo Bemon, a Franciscan priest. "Though dead fifty years, Bernal Diaz was thus brought forward as a convenient corroborative authority." This looks to us like special pleading. What object would there be for a conspiracy of this kind, and how could a conspiracy extend from Cortez in Mexico to the Franciscan priest in Spain, after a lapse of fifty years or more. The author quotes, to be sure, Sahagun, a contemporary and says though he speaks of their work in gold, he fails to furnish information in regard to silver, bronze and tin. He describes in detail the presence of gold feathers and so forth which Montezuma made to Cortez, but not a word about that wonderful silver disk that represented the moon. The omission of the silver disk and other remarkable objects from Sahagun's account does not strike us as strange, since it is known that his account of the expedition was composed upon the evidence

of surviving natives and the recollections of disinterested soldiers, and they were not as likely to know as much about the magnificence of the wrought specimens of art as the former writers were, still Sahagun speaks of many rich trinkets in tombs, of gold and precious stones.

In reference to this whole matter, we would say that there is at present a tendency to depreciate the civilization of ancient Mexico, and to make the people little more than savages, scarcely beyond the condition of the tribes of North American Indians which formerly inhabited the Mississippi valley. The writer who first begun this work was our distinguished friend, the Hon. L. H. Morgan, who wrote an article in *The North American Review*, entitled "Montezuma's Dinner," the object of which was to show that the reports of the civilization of Mexico had been exaggerated, and no such magnificence ever existed as Prescott depicted.

Later writers have gone to the same extreme. Mr. David A. Wells takes the same view. He says: "The popular idea of the civilization of ancient Mexico has very little foundation, and the fascinating narrations of Prescott, as well as the Spanish chronicles from which he drew his so-called historical data, are little other than the merest romance, not much more worthy in fact of respect and credence than the equally fascinating stories of Sinbad the Sailor." And in defence of this conclusion he calls attention, among other things, to the fact that the relics in the Museum of Mexico, which is probably the best collection of the so-called Aztec people that ever has been gathered, are very little better than those from the western mounds and some of the Indian tribes of the United States.

This position taken by Mr. Wells is not sustained by the facts. 1. The relics in the National Museum, as Mr. W. W. Blake has shown, are composed of gold, silver, copper tools and weapons, some of them in shape of idols and engraved images in imitation of the monkey and eagle. There are also copper bells in the Museum of Mexico and others in the official collection in the National Museum at Washington, which were made of hammered wires welded together, and are marvels of workmanship.

In reference to the copper, Mr. Blake says it was often alloyed with tin in the proportion of ninety parts of copper to ten of tin. The few metal spear-points and arrow-heads found in Mexico are all of bronze.

2. The sculptured tablets discovered by Charney at Lorillard and elsewhere show a very high state of art and much taste in decoration.

3. The articles written by Philip Valintini show conclusively that metal axes were used as coins in Mexico, and that metal-lurgy had reached a very considerable state of advancement.

## MYTHS AND LEGENDS OF THE ÇATLOLTQ.

### II.

[PRONUNCIATION—ç, a guttural k, similar to kr; q, the German ch in bach; c, çh in thick; e, çh in shoe; tl, an exploded l.]

#### THE MINK LEGENDS.

*Vancouver  
Is.*

The Salish tribes, to whom the Çatloltq belong, have a great number of legends referring to the mink. Some of the stories referring to this animal are identical with the adventures of the raven, as told by the Tlingit, Haida and Tsimshian. The mink does not play an important part in the folk-lore of these tribes, being referred to only incidentally: for instance, as the slave of the fabulous otter tribe. The most northern mink story of any importance is the Otçoáya legend of Bilqula, in which the mink appears as the son of the sun. Among the southern group of tribes of Kwá'kiutl lineage the mink legends are very numerous, and to a great extent identical with those told by the Çatloltq. Similar legends are told by the allied tribes of Puget Sound, but it does not seem that they are known to the tribes on Fraser River. A great number of these legends are very obscene, and for this reason have been curtailed, while others have been omitted.

Xâiq, the mink, wanted to take a wife. He went to the fog that shrouded the tops of the mountain and said: "Come here, my dear, I want to marry you." The fog answered: "You can not become my husband. What are you going to do when I play with my sisters, dancing around yon mountain?" "Oh," said the mink, "I will join your plays and dances." Then the fog consented, and they became husband and wife. One day the fog began playing with her sisters, and they danced around the mountain. The mink, joining them, took the hands of his wife and of one of his sisters-in-law. But, alas! he was not able to follow their rapid movements; they tore out his hands and he fell to the ground and lay as though he was dead.

Xâiq next went to the eagle and said: "Come here, my dear, I want to marry you." The eagle answered: "You can not become my husband. What will you do when I catch salmon in the sea?" "Oh," said the mink, "I shall also catch salmon." Then the eagle consented and they became husband and wife. One day they sat on the branches of a tree and looked down into the water, waiting for the salmon to come. âiq had put on the eagle's blanket, which enabled him to fly. His wife

said: "When you see the salmon coming, do not jump down too hurriedly, but use your wings deliberately, else you will fall into the sea." The mink promised to obey; but as soon as he saw the first salmon coming he forgot his wife's advice and jumped down greedily. He fell to the ground and lay there as though he was dead.

Xāiq next went to the gum and said: "Come here, my dear, I want to marry you." The gum answered: "You can not become my husband. What will you do when the sun shines hot upon me and I melt?" "Oh," said the mink, "then I will jump to and fro, that I may not stick to you." Then the gum consented and they became husband and wife. They lay down upon a board, and at first the mink jumped to and fro, but at last he became tired and fell asleep. Then the sun began to shine upon them, the gum melted and the mink was glued with his back to the board. He was ashamed and ran into the woods, and tried to strip off the board by rubbing his back against the trees; but his endeavors were in vain. At last an old man saw him, who asked him what he was doing there. When the mink had told of his misfortune, the old man helped him to get rid of the board.

Xāiq next went to the kelp and said: "Come here, my dear, I want to marry you." The kelp answered: "You can not become my husband. What will you do when my hair drifts to and fro with the tide?" "Oh," said the mink, "then I will take a firm hold of it." Then the kelp consented, and they became husband and wife. When the tide began to flow strongly, the mink took hold of his wife's hair; but it was moved up and down with great force, and the mink, who held on to it, was drawn into the water. Thus he was almost drowned.

Xāiq next went to the sharp-edged shells on the beach (*Saxidromus squalidus*). He said: "Come here, my dear, I want to marry you." They became husband and wife; but after awhile the mink was discontented with her and struck her in the face. However, he hurt his fingers, and blood dripped from his hand. "Now, look here," he said to his wife, "that serves you right; your face is bleeding." The woman replied: "No, it is your hand that bleeds." "Where does my hand bleed?" said the mink; "I don't see any blood," and so saying he turned his left hand round and round and cried: "It is your face that bleeds; there is no blood on my hand."

Xāiq next married the grizzly bear. He himself and his brother used to lie lazily near the fire while his wife went out fishing for salmon and gathering roe. Therefore when winter came his wife did not give him anything to eat except roots. Xāiq, however, stole dried roe from the box in which his wife kept it and tied it to his arm. When the bear saw his arms she asked:



"What have you got there?" Xaiq replied: "When I went to fetch wood I hurt my arm." The bear gave him roots for his supper, but, when eating, Mink took some of the roe from his arm. His wife heard the eggs crackling between his teeth, and asked: "What have you got there?" Mink feigned not to hear her question and said: "Oh, these roots are splendid." In mid-winter his wife ceased to supply him even with roots, and Mink, as well as his brother, were starving. One day he said to his wife: "Our enemies are coming here and they will undoubtedly attack us. Let us carry away our provisions." The bear believed what her husband said, and they loaded their boat with salmon, fish-roe and dried berries. Then Xaiq and his brother went aboard while the bear remained behind to collect some fuel. She followed her husband and her brother-in-law, but she had not gone far before she found fish-skins and the sticks, on which the fish-roe had been dried, on the beach. Then she discovered that her husband had deceived her and she became furious. She pursued the fugitives and in many places found the remains of their meals. At last she arrived at Taüseman (near the present Indian village of Comox). There she discovered a great fire and saw Mink and his brother sleeping by it. Mink saw her in time and succeeded in making his escape; his brother, however, was caught by the bear and killed. Then she continued to pursue Xaiq. He, however, created a wide river between himself and the bear, thus preventing her from pursuing him any further. He sat down and cried bitterly, as he had lost his brother. He spoke to a tree: "Oh, fall down and kill me; I want to be with my brother." Immediately the tree fell right upon the mink's face, but it was unable to kill him. Then he asked another tree to kill him, and it also fell right upon him, but did not hurt him; and however many trees he asked to kill him, none was able to hurt him.

Xaig feigned to be sick and finally to die. Then the people said to one another: "Come, we will dig a grave and bury him." "No," cried the dead one, "I do not want to lie in the ground and have the children jump over me." Then the people said to one another: "Come, we will hang him on to a tree." "No," cried the dead, "I do not want to hang on a tree and have the children throw stones at me." He continued: "Carry me to the island of Xuēm̄xumēm and leave me there." The people obeyed. When they had arrived at Xuēm̄xumēm they built a funeral pile and put stones on top of it. Xaiq's wife washed the corpse (as it is the habit of the Çatloltq to do), put it into a box which was placed on top of the pile, and went into the house of the raccoon. Then the dead one cried: "My wife! where have you gone?" When he perceived that the rac-

coon intended to take possession of his wife he became jealous, sent a boy to her and ordered her to clean his house, as he intended to return. She obeyed; he arose and continued to live with his wife.

One day Xaiq swam in a river. He saw a salmon which he wished to catch, but it was too swift. Then he sat down on the bank of the river and said: "Come here, salmon, I want to play with you." The salmon approached him a little—Xaiq said: "No, come nearer. Come close by me. I want to play with you." At last, after he had called him four times, the salmon came close to the bank of the river and Xaiq killed him. He carried him home and fried him by the fire. While watching the salmon he sang: "Who will eat its eyes? Xaiq will eat them. Who will eat its head? Xaiq will eat it. Who will eat its roe? Xaiq will eat it." At last he lay down to sleep. Then the wolf came and stole the salmon. Before running away, however, he rubbed its eyes, its head and its roe over the sleeping Xaiq's teeth. When he awoke and found the salmon gone, he cried: "Who has stolen my salmon?" but upon picking his teeth and finding some roe, he said: "Well, Xaiq must have eaten it himself."

After a short while a number of women passed the place where Xaiq lived, in their boat. Xaiq called them and asked: "Don't you know who has stolen Xaiq's salmon?" They did not know, but nevertheless he went into their boat and accompanied them. After a little while the women wanted to land, but Xaiq asked them to continue their journey to the next point. When they arrived there, however, he wanted to go still further, and thus he four times prevented their landing. Then they had arrived at the country of the wolves. He guessed that they had stolen his salmon, and thereupon he wanted to visit them. When he arrived at their village they took hold of him and began to play at ball with his anus(?). Every time he tried to catch it the wolves kicked it away. At last, however, he succeeded in getting hold of it and ran as fast as his legs would carry him. The wolves pursued him, but Xaiq said to a trunk that lay behind him: "When the wolves attempt to run around you, lie in their way, when they want to jump over you, rise." Thus it happened that the wolves were unable to continue in the pursuit.

One day Xaiq and his brother Alas (sea snail) went to fetch fuel. After a little while they saw a log drifting in the water. Xaiq said to his brother: "Transform yourself into a fish and lift the log from below." Alas did not reply, but without hesi-

tation jumped into the water; then Xaiq killed him with his club and carried him home to his grandmother, who was to boil him. When the fish was ready, he said to his grandmother: "When you eat the fish do not throw away the bones, but gather them in a dish." The grandmother obeyed. After a short while she asked Xaiq: "Where is your brother Alas?" Xaiq replied: "I think he is with his sweetheart, the gum." After they had done eating he took the dish in which they had gathered the bones, carried it out of the house, singing: "Grandmother does not know that she has eaten her grandson." He carried the bones to the pitch-wood, covered them with pitch, into which he inserted many colored splinters, then he threw them into the water and they were transformed into the sea snail. He carried the latter to his grandmother saying: "Look here, thus your grandson returns to you."

One day Xaiq saw people fishing and they were very successful. He wanted to join them, but he had no bait. So he went to his grandmother and said: "Please louse me." She replied: "Come, put your head into my lap!" Xaiq obeyed, but while his grandmother loused him he cut off a piece from her belly. Then the grandmother assumed the shape of a bird and flew away. Xaiq, however, was very glad, as he had obtained some bait. He tied the flesh to his hook and began fishing, but he did not obtain a single bite, although all the other fisherman had plenty of fish. Then he became very angry, and when a whale passed by his boat he cried: "As no fish is coming, come you, then, and take a bite." The whale did not come, but when Xaiq had called him four times he bit at the hook. Xaiq attempted to haul in the line, but the whale proved to be so heavy that the boat sank. Then the whale swallowed boat and mink.

The same legend is told in the following version: Xaiq took an immense herring rake and went fishing for herring. At the same time the whale had gone on the same purpose and drove all the fish away from Xaiq's boat. Then the latter became angry, and when the whale again rose to blow, he cried: "Oh, how bad is your smell, whale!" When he had done so four times, the whale resented this offensive speech and swallowed Xaiq and his boat. Every time the whale rose, Xaiq cried in the stomach: "Be it known to you, people, that the whale has swallowed me." The fishermen heard him and told one another that the whale had swallowed the mink. The whale continued to catch herring. Then Mink made a small fire in its stomach and began drying the fish on a frame. Every time the whale

rose, the fish dropped from the frame, and Xaiq was greatly annoyed. Besides this it was very hot in the stomach. Xaiq felt very uncomfortable and thought of the best way of making his escape. He resolved to kill the whale and cut his throat. The whale died and soon stranded near a village. When the people discovered it they began to carve it, and when they opened the stomach, behold! Mink jumped out of it. He had lost all his hair in the whale's stomach.

A'c'icin, the wolf's son, went into the woods deer-hunting. He hurt his foot by stepping upon a sharp stick. With great difficulty he hobbled down to the beach, where he sat down to wait for a boat to carry him home. Far out into the sea he saw Xaiq engaged in spearing fish. A'c'icin cried: "Oh, Xaiq, come here! take me home in your boat!" Xaiq heard him, but he feigned not to hear anything and continued fishing. It was not until A'c'icin had called four times that he looked up and said: "Did you call for me? Wait a moment, I shall be there right away and take you into my boat." He paddled toward the beach and prepared a soft bed in the bow of the boat. He put a stick across the gunwale which was to serve him as a pillow. Then he carried A'c'icin into the boat and deposited him on the bed he had prepared for him, being careful to have his neck rest exactly on the pillow. Then he spoke to him very kindly, saying: "Now try to sleep, I shall carry you home," covered him with skins and paddled away. Xaiq, however, intended to kill him. He had placed his neck so carefully on the pillow, as he wanted his throat to be exposed. When A'c'icin was fast asleep, Xaiq made the shore, carefully he took the cover from the wolf's face and then cut his throat. When the wolf was dead, he took his blanket and returned home. Then he hung it over the fire in order to dry it.

After a few days an old woman came into Xaiq's house, intending to sell something to him. He asked her to sit down by the fire and sang: "Look up and see what is hanging there." At first the woman did not understand him, but at last she looked up, saw the skin, and knew that Xaiq had killed A'c'icin. She went to the old wolf and told him what she had seen. He resolved to take revenge upon Xaiq. He invited all his neighbors, among them Xaiq, intending to slay the latter when he should come. He, however, guessed the bad intentions of the wolf. Therefore he called his grandmother, the cockle-shell, the clams and the *Saxidromus* and requested them to hide in the ashes of the fire in the wolf's house, and to throw water into the fire while he was dancing. He intended to escape unnoticed in the shelter of the vapor thus-originating. And he called his grandmother, the snail, and said: "Lie down in front of the

door of the house, that every one who leaves the house to pursue me may fall." And he called his grandmother, the mouse, and said: "Gnaw through the paddles of the wolf's canoe, that he may be unable to pursue me." They all obeyed his request.

When the watchmen who stood at the door of the wolf's house, saw Xaiq coming, they cried: "Begin to beat time, the chief is coming." The singers who were assembled in the house began to beat time with their batons; Xaiq entered and after having gone around the fire began to dance. When the wolf saw him he showed his teeth. Xaiq now began to sing: "It is I, who has killed A'c'icin." Then the wolf made a jump at him, intending to tear him to pieces. At this moment the shell-fish threw water upon the fire and Xaiq escaped. His pursuers fell when stepping on the snail, and when at last they had reached the boat and began paddling, the paddles broke, as the mouse had made them useless. Thus Xaiq escaped and he sang: "I have killed the son of the wolf."

I will add here a few other legends, which are in character somewhat similar to the mink stories.

#### THE DEER AND THE WOLVES.

The deer had killed the chief of the wolves and enslaved his son. He tied two boats large together and covered them with planks, thus forming a platform. Then he sang and danced with his child and with his slave. He sang: "I have killed the chief of the wolves." He tormented his slave, pushed him into the water and bade him swim. At last the latter got furious and struck the deer's son. When he cried the deer said: "I will make my son's heart glad. I shall cut off my slave's head." And he did as he had said.

The wolves heard his song and resolved to avenge the death of their chief and of his son. They went out to catch the deer. He escaped, but they overtook his son and killed him. Finally the deer climbed a high tree to escape his pursuers. The wolves formed a wide circle around the tree. They saw the deer's image in a puddle at the foot of the tree and believed him to be underground. They all commenced digging as hard as possible, in order to reach him. A man who happened to pass by, when hearing what they were doing, showed them that the deer was on top of the tree. Then the wolves stopped digging. They commenced to beat time and to sing. The first sang; "I shall eat your ears." The deer on the tree shook his head and sang: "Yes, you will eat them." The second sang: "I shall eat your nose." The deer: "Yes, you will eat it." The third, "I shall eat your tongue"; the fourth, "the shoulders"; the fifth, "the ribs"; the sixth, "the breast-bone"; the seventh,

"the loins"; the eighth, "the hoofs"; the ninth, "the stomach." At last the deer became so angry that it lost its hold, fell from the tree and was devoured by the wolves.

THE GRIZZLY BEAR AND THE BLACK BEAR.

One day the she grizzly bear said to the she black bear: "Come here and louse me!" The black bear obeyed and saw that the lice of the grizzly bear were toads. She caught them, threw them to the ground, and they crawled away. The grizzly bear heard this, and asked: "What is that falling to the ground there?" The black bear replied: "Small twigs fall from the trees." But the grizzly bear discovered the toads, got angry and killed the black bear. She cut off her breasts, boiled them and gave them to the black bear's children. They knew at once what the grizzly bear had done, but they did not say anything. They merely asked: "Where is our mother?" The old grizzly bear replied: "She has gone into the woods and will be back to-morrow." After a short while she left; then the black bear's children killed the young grizzly bears and placed them so that their heads and fore paws were in the food boxes, and it seemed as if they were stealing food. Then they ran away into the wood. When the grizzly bear returned and saw her children at the boxes, she resolved to punish them; but soon she discovered that they were dead. She got furious and ran into the wood to find the young bears. Soon she saw them sitting on a tree. She said kindly: "Come home, my dear children. Your mother has returned." The children replied: "Yes, we will come; but first lie down on the ground, open your eyes, your nose, and your mouth, and stretch your limbs. We want to give you something." The old bear did as she was bidden to do. Then the children threw wood-dust upon her that fell into her mouth, eyes, nose, and other openings of her body. She cried with pain, ran away and felled the trees with her paws.

DR. FRANZ BOAS.

NEW YORK, September, 1888.

### SOME ANCIENT DIGGINGS IN NEBRASKA.

The peculiar excavations described in this paper are to be seen near Nehawka, Cass County, Nebraska. The more prominent ones are around upon the east and north sides of a hill just south of Weeping Water creek, and on a level about forty feet above the stream. They have in every respect the superficial appearance of an old quarry. There is the long sag in the general slope, winding with varying width and somewhat interruptedly for several (20 or 25) rods, the up-hill side being abrupt, while the down-hill side slopes gently up over a low ridge. The whole surface is covered with soil and vegetation, so that few stones are seen. The sag, where best developed, is about fifty feet wide and three feet deep, while the ridge of rubbish has about the same dimensions. The whole might be passed as a quarry of some early settler of the vicinity were it not for two things: one that there are large burr oak trees growing indiscriminately about and on the sag and ridge, the other that the earliest settlers report that all had the same appearance when they arrived in the region.

Mr. Isaac Pollard, who has owned the land more than thirty years, and who called the attention of the writer to the works, has shown a very laudable spirit of investigation concerning them. During the past year, at considerable expense, he has endeavored to solve some of the questions connected with them. He has made two excavations which were fairly open at my visit. One was a pit made in the sag close to the up-hill side, the other a trench cut transversely through the ridge. Both are shown in the diagram in their proper relation to one another.

The pit was dug about eleven feet deep when it reached the bottom of the original excavation, which corresponded to the bottom of a thick layer of limestone. Carboniferous strata rose on one side to the height of six feet. Ashes and charcoal were found in considerable quantities at the bottom. The trench ran through the ridge on about the level of the bottom of the pit, showing distinctly the original surface covered two or three feet deep in some places with broken pieces of stone and carboniferous clay, and then the whole covered with rich soil four to six inches in depth. Where the trench intersected the side of the ancient digging, the latter was shown to have been abruptly downwards from the old surface for three or four feet.

I was unable to examine the carboniferous strata exposed in

the pit, but on the same level a few rods further west where a ravine has furrowed the slope, I found the following section:

One and one-fourth feet impure limestone; one foot clay, with millions of *fusilina cylindrica*; three-fourths foot shaly limestone do.; one and three-fourths feet clay do.; three feet yellow granular limestone in one or two layers, with large (4-8 in diameter) flint masses in the upper portion; one and one-fourth feet splintery gray limestone; one-half foot shaly sarlite: unexposed.

The flint bearing layer is probably Layer 9 in Meek's section of Rock Bluff, (Final Report of Nebraska, p. 96.) It has this character generally. Nearly a dozen exposures of it in an area twenty miles square have been noted.

Another lot of diggings are found about two miles northeast of the first locality and in quite different circumstances. They are on the top of a hill not much below the general level, and nearly or quite 150 feet above the first. They are in the form of pits nearly filled. Many specimens of *fusilina* are in the soil and a few blocks of a pisolitic limestone, some of them containing flint, were seen, but no layers in position were seen. It is not improbable, making allowance for difference in horizon and dip of strata, that this flint-bearing layer is No. 14, Wilson's section of Dr. White.\*

Regarding the age of the ancient diggings, little can be said except to establish their antiquity. As before said, there are numerous oak trees growing about the first locality. Several of them scattered indiscriminately were thirteen and fifteen inches in diameter, and one growing upon the abrupt side of the old excavation was seventeen inches through. No stumps were noticed, therefore no count of rings of growth was made.

At the other locality a stump of a tree sixteen inches in diameter was noted, in which eighty rings were counted in about three-fourths of its radius. The depth of the rich soil over the pile of carboniferous debris also indicates a long time. So long that the works must be considered as aboriginal. Though it is fairly established that one or more Spanish expeditions† penetrated eastern Nebraska more than 200 years ago, they made no lasting settlement. Besides no structures, such as they would build of stone, have been found.

If, therefore, the Indians made these excavations with an outlay of labor very far from habitual for them, what could have been their purpose? Several hypotheses have been suggested.

One which comes quite readily from the frequency of such works is that they were for fortifications. This is easily disproved by the fact that they are only on two sides of the hill, in the first case, leaving the most exposed quarter unprotected.

---

\*Geol. of Iowa, Vol. I, p. 359.

†Don Diego, Count of Penslosa, 1602.



Besides fortifications could have been made at a little greater elevation without incurring the labor of moving stone.

That the flint was the object of labor, has been strongly hinted. Mr. Pollard found several masses of limestone among the debris, but found no clear cases of the removal of the flint. Besides it would seem unnecessary to make such extensive excavations in this one locality for flint, when equally good localities and even more easily accessible were undisturbed.

To these objections it may be replied; 1. We should not expect any distinct marks of tools used for removing the flint, for it was probably done mainly by breaking the stone by the application of fire, and the striking together of the smaller blocks: The frequent occurrence of charcoal in the bottom of the old quarry indicate this. 2. The frequent occurrence of flint still in the limestone may be accounted for, by occasional oversight, by greater difficulty of removal in some cases, or more frequently by their faulty character, of which last we might not perhaps be qualified judges. 3. The limitation of the excavations to these localities may be accounted for by their being adjacent to a favorite camping or dwelling place. Three important branches of the Weeping Water come together near this locality. Lodge rings and storage pits are frequently found at several points not far from the junctions. The region has not, however, been thoroughly explored. The extent of the old quarries may have been the result of many years of labor. It is possible also that some superstitious or religious influences may have concentrated the quarrying of flint to this particular neighborhood.

We are reminded of the Great Pipestone Quarry of Minnesota, by several analogies. The excavations do not differ greatly in linear extent. In each case the quarrying has been the product of a thin layer, gradually hiding itself deeper below the surface and covering itself with superincumbent strata quite difficult of excavation. In each about the same limit of depth was reached before the work was laterally suspended. In each case the material sought seems to have been more easily obtainable, at least in later stages of the work, at other nearly adjacent localities. Pipestone is found in two localities in Minnehaha County, Dakota, in thicker layers than at Pipestone, and yet it seems not to have been worked by the Indians.\*

In the Pipestone quarry myths and superstitions of various sorts seem to have had a controlling influence in continuing the work begun. Whether and what such were in the case of the Nehawka flint quarry, we leave to future investigation.

J. E. TODD.

TABCR, Iowa, August 1, 1888.

---

\*Geol. Report of Minnesota for 1884, pp. 91 and 95.

## MOUND CRANIA FROM ST. FRANCIS COUNTY, ARKANSAS.

The human crania and other bones herein mentioned were exhumed from a mound on the banks of "Fifteen-Mile Bayou" in St. Francis county, Arkansas, during the month of March, 1888, by Mr C. W. Riggs, to whose kindness and care I am indebted for the specimens. The mound referred to is one of a circle embracing twelve or fifteen similar but smaller ones; and the depth at which the specimens were obtained varied from three to nine feet.

The circle of mounds, of which no measurements were taken unfortunately, is situated on a ridge in the bottom land. Besides the specimens here described there were probably fifteen or more skeletons less perfectly preserved, which were not thought worth removal.

Skull No. 60,\* is that of an adult, probably male, about 45 years; brachycephalic; ponetal index (index of breadth) .825; internal capacity not measured. The muscular prominences and depressions well marked; superior maxillæ slightly prognathous; teeth of upper jaws all present excepting wisdom teeth, which have been naturally lost and the alveolus absorbed; cusps of teeth are flattened and worn through to the dentine at their apices.

The most remarkable feature of this skull is the almost complete occlusion of both external auditory meatuses, by bony growths (exostoses) springing from the posterior wall of the ear canal.† The sagittal and coronal sutures are almost obliterated by synostosis; and the lambdoidal presents a large triangular wormian bone ("inca" bone) at its apex. The occiput is markedly flattened asymmetrically. In its general form and state of preservation it could not be differentiated from an average skull from the Madisonville (Ohio) prehistoric cemetery.‡

Skull No. 61, is an adult, smooth, light-boned brachycephalic, of fair capacity (not measured). With the exception of the nasals the bones of face are wanting. Index of breadth, .865. The bones are light and spongy in texture and synostosis is complete—of the coronal, sagittal and middle two thirds of lambdoidal sutures. By reason of a *post-mortem* fracture of the base, the sphenoidal sinuses are laid open and are seen to extend into the basilar process of the occipal bone. A portion of the roof of both orbits has disappeared by absorption. The general characteristics are thus those pertaining to senility. As

\*Numbers refer to my own catalogue.

†For reference to other examples of these interesting growths in prehistoric races see Langdon in *Journal Clin. Society Nat. History*, IV, p. 237, et seq.; also Ayres, *Archives of Otology*, X, p. 327, et seq.

‡See *Journal Clin. Soc. Nat. Hist.*, III, 40, and IV, 237.

the bones of face are wanting, the teeth are not available as age indicators. Looking at the interior of this specimen, the grooves for the meningeal arteries are remarkably wide and deep, and the internal frontal crest unusually long and prominent.

Skull No. 62, is an adult, rough, dense, heavy skull, with very thick bones and very distinct sutural separation; brachycephalic; index of breadth, .800. Internal capacity, rather less than the two preceding. The teeth are but slightly worn, (only one upper jaw present and the lower jaw absent). Its muscular ridges are highly developed, and its general features are such as would indicate a vigorous male of twenty-five or thirty years. The outline of nasal bones is such as would suggest a strongly Roman profile. The "temporal process"\* of malar bone is fairly marked in this and in the preceding specimen.

Specimen No. 63, is an adult lower jaw bone, remarkable for its great size and especially the width between the condyles; indicating a correspondingly broad skull. The teeth indicate an age of thirty to thirty-five years, the cusps being flattened. An idea of its great size will be conveyed by the following measurements:

Between outer extremities of condyles.....	14.0 C. M.
Between inner extremities of condyles.....	9.4 "
Symphysis to post. margin of ramus just above angle.....	11.3 "
Between angles, outside measurement.....	11.5 "
Width of rami just below neck of condyle—Right side...	3.9 "
Left side.....	3.7 "
Height of body at symphysis.....	4.5 "
Height of body opposite first molar.....	3.8 "

The entire bone is very massive and the muscular markings in correspondence with its size. Several small osteophytic process are apparent in the inner surfaces of the alveolar processes. A shallow, rounded cavity, large enough to contain half a pea, appears on the inner surface of body on left side, just anterior to the angle and immediately above the lower border. The size of the foramina (inferior dental and mental) are in correspondence with the general character of the bone.

No. 64, also an inferior maxilla, is a small, smooth, light-textured, slightly marked bone, evidently that of a young female.

Amongst the remaining bones of the collection is an adult humerus, remarkable only for its very small size; and a specimen of complete sacro-iliac synostosis.

In another mound of the same group, opened by Mr. Riggs, was found, at a depth of seven feet, a mass of charred grass cloth, very coarse in texture, measuring about six square feet in area and from one to four inches in thickness. A portion of this has been donated to the Cincinnati Society of Natural History and is now in its anthropological collection.

F. W. LANGDON, M. D.

\*Vide: Langdon, Journal Cintl. Soc. Nat. Hist., IV, 243.

## Correspondence.

### SURVIVAL OF THE STONE AGE.

*Editor American Antiquarian:*

You ask two or three questions to which I answer some uncertainly, but some I believe to be certain. As to the geologic periods, and their duration, there is much difficulty in determining their relation to the man of that time. It is impossible to even approximate the time in years, and that is what is demanded by the archæologist. I have already shown the differences of opinion concerning man in the tertiary period, but it appears certain that man was on earth during the quaternary period. In France, at least, the divisions suggested during the paleolithic age, have been generally admitted. The neolithic age succeeded the paleolithic, and was divided from it by a line remarkable for its sharpness. The neolithic run its course with its civilization, and was succeeded by the bronze age; and of both these I think it can be as fairly said, they were both prehistoric, as it can of the paleolithic age. The bronze age run its course in Italy before the Etruscans. It had its existence and was superceded by iron earlier than Rome, and earlier than any Grecian or Roman history of that country. From thence it spread all over western Europe, equally and completely prehistoric. No history of western Europe is even pretended to have been written in, or during, or to give any account of the bronze age, except to describe it as prehistoric. Of course the neolithic, which preceded it, must have been equally prehistoric, if not more so. I think it can be fairly said that there is no evidence to show that during either of these ages the people had any written language, and beyond the fact that they were men, any spoken language either. It is thus that they must have been prehistoric.

Mr. John Evans is of opinion that iron made its appearance in England about four hundred years B. C., and that the bronze age, which had preceded it, had endured in the neighborhood of a thousand years. It is believed that iron made its first appearance in France from six to nine hundred years B. C., with the advent of the Phociens or Pheniciens.

The history of that country does not date much earlier than the occupation of these countries by the Romans. The Ro

mans wrote what they saw and knew, and the traditions, such as they received from the Ligurians, Iberians, Celts, Gauls and ancient Britons. Behind these lay the ages of bronze and stone, which were, of course, prehistoric.

You ask me for authorities for some of the propositions in my paper covered by what I have said in this letter. To give you these authorities would be to call the roll of all prehistoric anthropologists in Europe. There may be some who have doubted and denied details, but on the great principles the people of western Europe are as well settled and as generally admitted as is the Christian religion in the United States.

You ask about the Lake dwellings. They commenced in the neolithic period, continued during that period into and through the bronze and into the iron. There are a great many places in the world where they may have continued to a much later, not only historic, but even modern time; but they had disappeared in France, Switzerland and Austria before the history of those countries was commenced.

This last was also true of the occupation of the caves. Many of the prehistoric caves of France have been occupied in historic times, dozens of them during the religious wars in the 15th and 16th centuries. I have seen one, the date cut in its walls, 1589 A. D., and all along the banks of Loire they are still used for human habitations. But the genuine prehistoric caves, occupied as they were by man during the paleolithic age, that is the Mousterien, Solutrien and Madelaine epochs, were entirely anterior and bore no relation to the Lake dwellings. These three epochs were contemporaneous with the cave-bear, mammoth, and the reindeer. These were all extinct at the beginning of the neolithic age, and none of their remains have ever been found in connection with any of the Lake dwellings.

I hope I have answered your questions satisfactorily. I have tried to do so plainly. I have not put any portion into my paper.

Yours truly,

THOMAS WILSON.

—o—

✎

## ANCIENT CANALS IN NEVADA.

*Editor American Antiquarian:*

DEAR SIR—I am very much interested in your magazine. We published an article about seven weeks ago in the *Republican* which was an epitome of a pioneer's trip across the plains. It contained a very interesting account of an ancient canal, found (as near as I could tell from his description) in the extreme southwest corner of Nevada. His trip was made in 1849. He and his companions also found, near the canal (which, by the way, was lined with rocks) one or two mounds. The party re-

mained several days and unearthed from the mounds some highly decorative pottery. The jugs were egg-shaped, with the smaller end cut off for an opening. Some of the vessels had earthen leaves and vines, looking like grape vines and leaves, twining around them. The surroundings seemed to indicate that the country had been uninhabited for ages.

In Death Valley, Inyo county, California, the same party of pioneers found a small tribe of Indians who lived in holes in the ground. The Indians were filthy in appearance and very ignorant.

There are a great many Indian mortars and pestles found in nearly every county in California.

H. E. BOOTHBY,

Assistant Editor *Republican*.

FRESNO, Cal., Oct. 15, 1888.

---

## PALEOLITHICS IN NICARAGUA.

*Editor American Antiquarian:*

I see attention is again drawn to the (so-called) paleolithics of North America.

When collecting antiquities here, I was puzzled by often finding this class of implements associated with the (so-called) neolithic burials; seemingly explained by the numerous reoccupations.

In 1874 I called Dr. Berendt's attention to it when here, who had visited many tribes, from Tehautepec to Colombia, and whose opinion was respected. He eschewed the term, as many existing tribes used this class of implements while others were used, the tribes producing many articles requiring skill. If they cling to them as heirlooms, facility of production, or burial; the fact remains.

The same may be said of the plough, used here since the conquest, the traditional implement, used for centuries. Yankee neolithic ploughs are rarely seen.

When Dr. Berendt was here, captives of the "Ria-fria" Indians, brought out and sold to servitude by the Rubber-men, verified the existence of implements of the kind spoken of. A more exclusive race could not be found. Shut in near Fort San Carlos for four centuries, never seeking intercourse or exchange, those captive here preferred, when first brought out, raw food, salt was unknown to them. With difficulty collected through the patrons of the Rubber-men a few stolen articles they occasionally left in flying from their ranches at the approach of strangers, and sent them to Professor Henry, of the Smithsonian.

A boat they captured was burnt, so as to convert the nails into fish-hooks; canoes they had none, using log rafts for fishing; made their hip cloths by felling with immense labor trees along the streams, then pounded and macerated the bark. Their

metals the most primitive in Central America, surface concave, using a rounded boulder for grinding. Bows well made, arrows made from flower stalks of the sugar cane; length from five to seven feet, tipped with a splinter of pejirale. Necklaces made from perforated teeth of various animals, plaited together with fiber of palm, nets of same. meshes evenly divided, twine in balls of same, as evenly made as that in a Fall River cotton mill.

I then paid more attention to the (so-called) paleolithic implements, and early in 1878, while searching the flattened mounds near the "San Andres" cave (so often mentioned in my letters to you) for any relic bearing traces of its occupants, I found flint-chips and celts of this type of implements, also pieces of pottery, crudely made, similar to a type found at Zapatens under two succeeding layers of a better class, that indicates reoccupation. This led me to search below, where I was surprised by finding a fine class of pottery, with decomposed shells; made five openings with due precaution, convincing myself that no connection existed between the two deposits. (See private numbers 100 and upwards at Peabody). Here I had Dr. Abbott's turtle backs of the Trenton gravel, entirely out of place, nearly proving the cave's antiquity; then I believed Dr. Berendt was right, who wrote me from Guatamala, Feb. 22, 1878. "I consider it absurd to take European points of view, such, for example, as neolithism and paleolithism, which even can not and will not stand, at once for the bottom of wisdom, and build our American theories upon it." My letter informing him of the find was on its way when news came of his death. Notified Prof. Putnam, for whom I was collecting, and since then use the terms paleolithic and neolithic only to repudiate them.

We take it for granted that a find or burial exclusively made up of these implements, and under other deposits, denotes their older origin, and have no doubt that these crude celts were used by primitive man; but to prove the antiquity of a given find, it must conform to the surroundings, not on top of a better class; if you accord such finds to the scriptural phrase that "the last shall be first," or to a new creation, all right. For our part we place such finds as those here among the proofs of a succession of races, and turning our attention to Egypt and Palestine, find an apt comparison there in the nomad tribes who wander over the ruins of a higher civilization.

Succession is as applicable to man as well as animals. We transport monoliths and Grecian sculptures to mingle with our own. We too shall pass away. Will a (so-called) paleolithic race succeed us? Drop the term and conform to the biblical idea of reversion supplanting "the last for the first." A mingling of races and a confusion of tongues shrouds in oblivion the distinct creations of man and animals. Who were the first race, will never be known.

Yours truly,

E. FLINT.



## THE FEAST OF NE-KILST-LUSS, THE RAVEN GOD.

A TRADITION OF THE QUEEN CHARLETTE HAIDAS.

*Editor American Antiquarian.*

The following tradition, never before given to the public, I have just found, along with a number of others, amongst these people. It is to this effect:

Long ago, Ne-kilst-luss, wishing to give a great feast to all the people of earth, took a trusty bow, with a quiver full of arrows, in order to provide a goodly supply of food for his future guests. After hunting over hill and dale, by lake, river and stream, he obtained a supply, which he set about to prepare for his guests. When all was ready, he invited his guests in a very peculiar manner, as follows: Turning to the east, he stamped his foot on the ground. No sooner had he done so, than a large number of people, of a different language and color than those around, came in their canoes. These he welcomed to the feast. Then turning to the north, he again stamped his foot, with the like results. This time a people different from all others, in language and color, arrived in their canoes; they also were welcomed to the feast. After their arrival, he turned to the west and stamped on the ground, with the same result. Turning to the south, his stamp brought a fourth people in their canoes. These also were a different people, distinct in language and color. When all these various peoples or nationalities had arrived, the feast proceeded. After several days of feasting, dancing and singing, all the provisions being exhausted, and every one having received a present, this motley group left for their several homes.

Whether the ancient custom of what is known as potlatches originated through this tradition or not, I cannot tell. However, at these feasts, every tribe within reach were assembled by invitation from the chief, many of whom spoke a language different from the others. Another thing connected with this tradition is that all the four stamps should bring people of different colors, as well as languages.

Beyond one hundred years ago, there is no record of these people having been visited by any one from the outside world, yet they have traditions, handed down through ages, which point to a knowledge of other races of people besides themselves. How came they to know of their existence?

Cowquitz, Q. C. Island.

JAMES DEANS.



Part. 4.8

## Editorial.

## THE SERPENT EFFIGY AT FT. ANCIENT.

The use of the serpent as a means of defense has been alluded several times in this magazine. We have in our articles upon to symbolism spoken of various forts which have their walls in the shape of massive serpents, namely those of Colerain township and on the Great Miami above Hamilton. We have also intimated that the walls at Ft. Ancient bore this shape. We are now prepared to speak of it more positively, as the results of personal observations. We have, during this year, made a second visit to this remarkable fort. We made some important discoveries—discoveries which illustrate the habits and peculiar superstitions of this unknown people. It has been stated by Mr. W. H. Holmes that the great serpent in Adams County is built on a ridge which in its general contour, shape of the cliff, and appearance of the cliff from below, bears a striking resemblance to a massive serpent. We imagined that the same might be true at Ft. Ancient, and hence our second visit. It was proven to our satisfaction that the same superstition was embodied here. The contour of the ground, the shape of the bluffs, and the course of the streams all have peculiar serpentine lines, and would easily suggest the idea of serpent divinities haunting the scene. The resemblance of the bluff of the river to massive serpents at least was recognized, and one reason for the erection of walls in the shape of a serpent was proven.

Our former visit was in 1878. It was made in company with several gentlemen belonging to the Natural History Society of Cincinnati and members of the First State Archæological Society of Ohio. At that time we thought we discovered the shape of serpent effigies in the walls which surround the lower enclosure, the heads forming the gateway to the fort. We were accompanied in our second visit to the place by Mr. T. J. Brown, the editor of the *Miami Gazette*, and Mr. Ridge, who lives near the fort. These gentlemen recognized the serpent shape of the walls and noticed that the gateway was made to imitate the head of the serpents, the opening in the rear of the mound representing the stricture in the neck of the serpents. If the object had been mere defense the walls should have been

straight at this point. In fact, a straight wall throughout the entire length of the cliff would have been about as secure and the labor of building it would have been infinitely less. It would seem as if the walls were everywhere as tortuous as they can well be, making the length several times greater than if they had been in straight lines, or in angles, as modern forts are built. It may be maintained that the walls are made tortuous for the sake of taking advantage of the steep incline of the bluff, and are tortuous because they are conformed to the ground bend of the bluffs. At the gateway, however, there is no conformity, but the wall twists in such a way as to give the shape of the serpent's neck to it, and goes away from the cliff to bring out the shape. The roll of the serpent is given by the walls, they being higher in some places than in others. Our opinion is that the tortuous shape of the wall is owing in part to the imitation of the serpent form and that their rise and fall is owing to the same cause, and the walls were made not only to conform to the crooked line of the cliffs or bluffs but were carried to an extreme of tortuousity and were made more crooked than necessary to bring out the shape of the serpent. As additional proof of this we would cite the following circumstances: While standing on the walls at the lookout station at the west side of the fort we discovered that the river which flowed in full sight below has a very contorted channel. Its banks are circuitous, and above the banks the high bluffs rise in wild and confused lines, making immense contorted ridges of rocks, covered with woods, which from this point appeared not unlike great serpents. We found that there was a causeway leading from the interior of the fort to this point, and we have no doubt that the former inhabitants frequently looked down upon this wild scene and caught the same idea. Our opinion is that the resemblance of the ridges to two gigantic serpents was first presented to the superstitious minds of the builders from a view of the scenery from this point or some other, and that the fort was built here not merely because it was a place of security, but because of the resemblance which had been recognized. When it was built it was made in imitation of the form of the serpent to bring out the spirit of the scene, which, according to their peculiar views, was a real spirit and one which haunted the region. We think that the great serpent in Adams County and Ft. Ancient in Miami County were built by the same people. If they had a superstition about the serpent occupying the hill in one place, they might have the superstition about two serpents haunting the ridges in the other place. The walls are certainly suggestive of this superstition, for they convey even to the mind of the modern visitor the idea of massive serpents rolling along the edge of the cliffs, with their heads nearly meeting at the gateway. Our first supposition was confirmed by our second visit. In addition to this we also made the discovery

that the larger fort may have also been guarded by serpents. This was first suggested by Mr. Ridge, who was one of the party. It had not occurred to us before. The walls at the gateway on the west side are certainly very tortuous. They are also broken with openings making the ends to resemble massive heads. Other openings, to be sure, partially dispel the illusion. Still the continuous wall on the north side may have been intended to represent the same effigy. We believe that if the works had been preserved in their original condition, we should be able to see this more clearly. The graded road which passes through the enclosure has widened the original gateway and partially destroyed the tortuous wall which served as a guard to the gateway. We noticed that a slight ridge passed from the gateway outside part way down the hill. This conveyed the idea of a graded way or a covered way formerly led from the gate to the end of the hilltop, though the modern grade has nearly destroyed it. The walls on the east side have been obliterated, but the lookout mound at the end of the wall is still to be seen. The terraces on the southwest side of the fort we believe to have been natural, and yet they may have been modified by artificial means.

Our next object was to examine the terraces on the Miami River and its vicinity. There are a few gentlemen at Waynesville, Ohio, who have been giving attention to "terraces." These terraces we were invited to examine. In company with Mr. T. J. Brown, who has written on the subject in *THE ANTIQUARIAN*, and Mr. Sayle, a very intelligent farmer in the vicinity, we visited Cæsar's Creek. The terraces we found, as we anticipated we should, to be natural formations and not artificial. We fortunately, however, discovered through the politeness of Mr. Sayle an earth-circle or ring. It is situated a mile south of Wayesville and resembles the one described by Squier and Davis as situated opposite Portsmouth. It contains a circular wall with a ditch inside enclosing a low mound, with a level platform around the mound between the ditch and the mound, with a narrow causeway through the wall and across the ditch to the platform. The diameter of the mound is about 150 feet.

Another discovery was made in connection with this trip. The fortification on Little Miami, called Fort Ancient, is connected with the Miamisburg mound on the Big Miami, fifteen miles distant. At least we discovered lookout mounds on the route between the two places which seemed to connect the two rivers, and we imagined that we could recognize the very hill tops where the old fort is situated. One of these lookout mounds we discovered at Burnett Quarry, in Warren county and another in Washington township, in Montgomery county. To the west of these is the large mound in Franklin township, but we could not ascertain whether this was a lookout for the Big Miami river or was designed as a connect-

ing link between the two rivers. Another discovery was made at Miamisburg. It appears that the bluff on which the Big Mound is situated gives an excellent view of four separate valleys which concentrate here, one from the east, another from the north, a third from the northwest, and the fourth to the southwest, the channel of the Miami river being attended with two openings on either side. The spot was well chosen for this view. We noticed, however, that as we arose above the level that the vision gradually extended over the hills which surrounded these valleys and by the time we reached the summit it extended so as to embrace another series of hills further away, but otherwise hidden by the nearer summits. This we consider was the object of the Miamisburg mound. It proved to our mind that it was built as a beacon. The smoke could be seen by day as it might arise from the distant hills, but a beacon could not be seen at night. No signals could be exchanged except as one stood on the summit of the big mound. This mound, 30 feet high, is made of surface soil. The farmer living at the foot of the mound told us that the soil adjoining is very thin, not over sixteen inches before one gets to the rock.

At Alexandersville we discovered the remains of the square and circle which has been described as situated near Dayton. Our old friend, S. H. Binkley, has re-surveyed these works and was so polite as to show us the walls and trace the outlines for us. Instead of being an unfinished work, as Mr. Binkley and others maintain, we think that it is a very old work and that the water which sets back from the Miami river and from the branch has at different times covered the bottom land and gradually removed the walls.



#### IN MEMORIAM.

Rev. O. D. Miller died in Nashua, N. H., Nov. 7th. Mr. Miller was formerly a contributor to the Oriental Department of this journal, and furnished some very valuable articles. No man in America was more thoroughly acquainted with Assyriology and the cuniform language and literature than he. His articles have been quoted by Rev. Dr. Warren in his book on "Paradise Found," and by other noted authors. It was a privilege to the editor of this journal to furnish these articles to the public, both because of their intrinsic merits and because Mr. Miller's modesty and ill-health were such that they were not likely to appear except as they were solicited. They now form a part of the world's literature on this subject. They show the industry, careful research and wide learning of the author. The Rev. Dr. Miller was modest, unassuming, true-hearted, faithful, patient, devout.

## THE ANTIQUARIAN FOR 1889.

This number finishes the tenth volume of *THE ANTIQUARIAN*. We thank our subscribers for their continued patronage. Ten years ago there was not a journal in the country which gave any especial attention to archæology. There are now five. Our patrons, however, have continued faithful in their adherence to the first one established. Society journals will, of course, expect the support of their members. *THE ANTIQUARIAN* is not the organ of any society, and yet it seems to have retained the patronage of the prominent archæologists. We shall continue the magazine with increased assurance. There are other reasons for encouragement; the increased interest in archæology is not the least of them. We are glad to know that the magazine is taken by so many societies and that so many classes have access to its pages. We have received a number of contributions from distinguished persons in other countries as well as in this, and find that the magazine is especially welcomed in polite circles. The broad character of the magazine seems to be in its favor. It secures a great variety and enables us to make the magazine somewhat popular. Still the technical and scientific character will be continued. The same associate editors will have charge of the different departments in the future with the addition of Mr. Thomas Wilson, of the National Museum at Washington, Mr. G. F. Kunz, of the firm of Tiffany & Co., New York, and Mr. James Deans, of British Columbia. Among the contributors in this country from whom we have already received articles we will mention the names of Prof. Otis T. Mason, Mrs. E. R. Emerson, Mrs. F. N. Swanwick, Mr. E. T. Cresson, and Dr. Earl Flint. We also mention as new contributors from abroad Mrs. H. G. Murray Ainsley of Binghampton, Dominick Daly, barrister at law, Nottingham, England, and Mr. A. Forrer, of Switzerland. Other names might be mentioned, as their contributions have been promised. We think the prospects for the future are encouraging.

The question arises: Shall we make the magazine a monthly? We leave that partly to the decision of the present patrons. If each one will make the effort to increase the subscription list, it can be done. One subscriber secured by each will double the list and all uncertainty will at once be removed. We ask whether it is not worth the while to make the effort. It has been a great pleasure to us to run the magazine in the past. It has not been published for the profit there was in it. We only ask that our patrons should assist in increasing the circulation, because we want to give them more for the money. It is for the benefit of our readers that we ask this assistance. We think the time has come that *THE ANTIQUARIAN* should be a monthly, but we look for a response from our patrons.

## LITERARY NOTES.

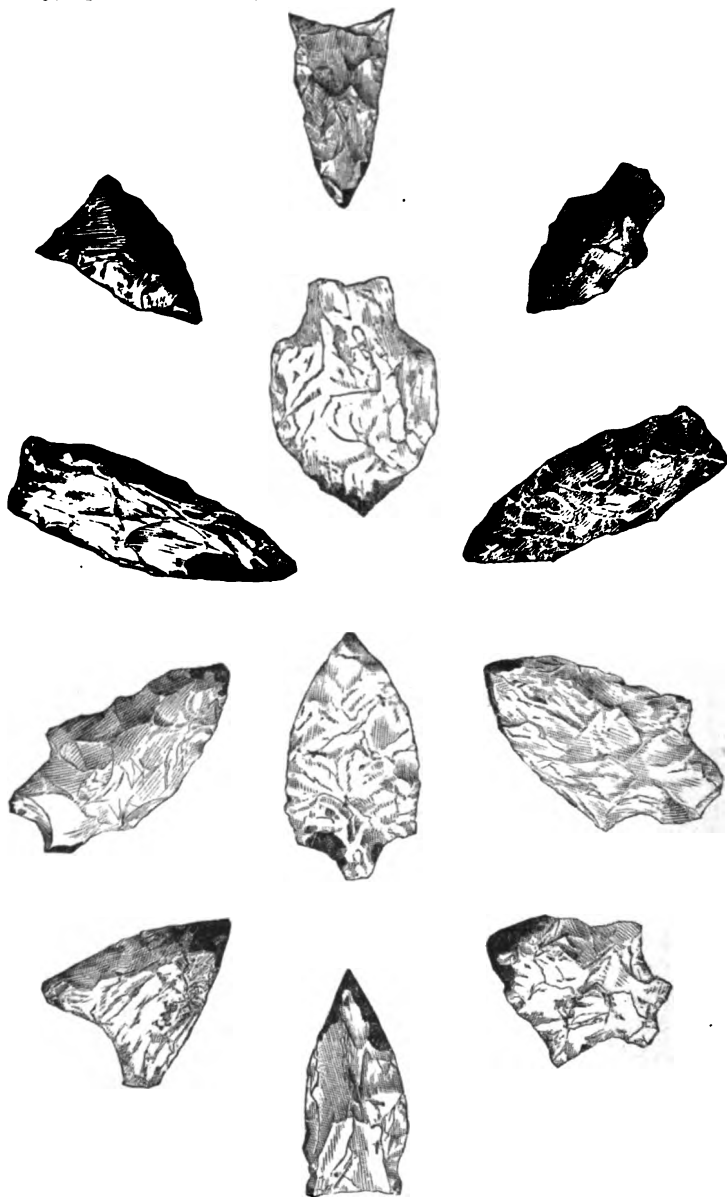
**JADEITE RELICS** exhibited at the Thirty-seventh Meeting of the American Association for the Advancement of Science, at Cleveland, August, 1888. —Mr. Kunz exhibited a jadeite breast-plate that had been obtained in 1884 by a German engineer from a tomb near Santa Lucia, Cotzulmalguaua, where Dr. Behrendt has made some extensive excavations and obtained a quantity of large engraved stones and other antiquities from the old temples and tombs, of the ancient kings of Quiche, which exist in that neighborhood.

It is 16 c. m. ( $6\frac{1}{2}$  inches) wide, about 12 c. m. (5 inches) high, 1 c. m. (2-5 inches) thick. The color around the edges is a grayish green, while on the outside at the center, it is a light rusty brown, perhaps from burning. By transmitted light, the color is a light apple green. It has been drilled at two places on the back edges with holes 4 mm. ( $\frac{1}{4}$  in.) in width and has been cut or sliced from some boulder, as three of the back edges show. At one place on the side there are evidences of an attempt to slit it. On the front, Dr. Valentini says that the cutting represents a human face or mask, or rather the headgear of a man, representing the symbol. *Achau*, meaning the "Ross" or "Lord," the head of the tribe, one of the most common motives of the Maya, which is found at least one thousand times drawn and colored in the Maya codices, forming the walls and friezes of their structures. *Achau* is also the name of the 19th day of the Maya month.

The two eyes are represented by circles with two flattened sides. Below these is a beard or tattooing. A circle with a central dot represents a month, and the nose is an oblong between the two eyes, extending below the tattooing. The ears are quite natural, and from them are suspended feather pendants, which also cover the top of the head and probably ornament the chin also. It was undoubtedly used as a breast-plate or ornament, suspended from the neck of a chief or idol.

He also said that the theory that jadeite or chalchihuitl (jadeite and not turquoise was called such) was highly prized by the aborigines had been greatly strengthened during the last ten years, more especially since Prof. Putnam exhibited before the American Antiquarian Society, April, 1886, his remarkable series of Nicaraguan and Costa Rican jadeites, which were all ornaments made by cutting into halves, thirds or quarters, celts perforated by one or two drilled holes, in one instance two of them fitting together. Prof. Fisher's theory, he stated, was that this jadeite originally came from the East. The sixteen-pound adze exhibited by Mr. Kunz at the last meeting of the American Association for the Advancement of Science, from which fully two pounds had been cut; the breast-plate herewith exhibited only one-half inch in thickness, and the fact that Burmese jadeite when burned or exposed to a high temperature will assume the grayish-green color of the Mexican all tend to support this theory, although Dr. Meyer, of Dresden, still firmly believes that this material will yet be found

*in situ* in Mexico, and that a paper read before the American Antiquarian Society, April 27th, 1881, by Prof. P. J. J. Valentini, described the Humboldt



*Fraudulent Arrow Heads.*

celt or votive adze and the Leyden plate, two remarkable carved jadeites, The formercelt was 'presented to Humboldt by Del Rio in 1803, and the Leyden plate was given to that museum by S. A. Von Bramm, who found

it near St. Felipe, close to the borders of Guatamala in Honduras. They are both 9 inches in length and  $3\frac{1}{4}$  inches wide, the former 1.2-5 inches in thickness and the latter 1-5 inch. From this identity of measurement and the fact that the two, if placed face to face, have exactly the same outline—Mr. Kunz said he thought the two objects, which are among the most remarkable ones of this material known, it is evident that they were originally part of one and the same celt, and that the remaining parts might still be found. He also announced that pectolite, the jadeite substance of which many of the implements found at Point Barrow are made, had recently been discovered *in situ* in Tehema County, Cal., and that he had obtained an ice cutter of true jade, weighing nine pounds, from the Yukon river, with the assurance that at no distant day a large mass directly from the rock would be sent him from that district.

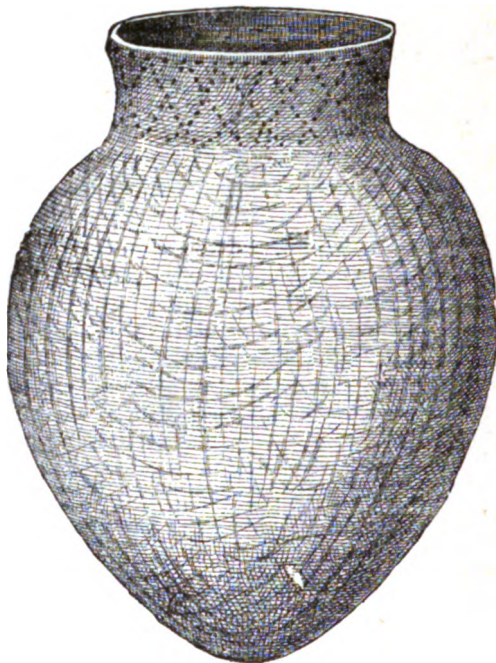
**GOLD ORNAMENTS**—Mr. Kunz exhibited a large gold ornament, loaned him by Dr. Rossiter W. Raymond, of New York, who furnished the following account of its finding, and who will describe in the Trans-American Institute of Mining Engineers: It was unearthed during some excavations made for the foundation of mine buildings for the Great Remance Gold Mine, situated near San Francisco, at the northeastern terminus of a road connecting the mines with the Pacific coast at Santiago, department of Veraguas, east of Chiriqui, department Nacional de Panama, United States of Colombia. A skeleton was buried with it and it had evidently been used as a breast ornament. It weighs 7.23 oz. Troy, dwts., and measures 20 c. m. (8 inches) across the wings, and 10 c. m. (4 inches) from the head to the spread tail. It represents a bat with a deer's head, the antlers having alligators' heads, these on a human-like body with six toes on each foot. It is made of two colors of gold, the body and right wing being of yellow gold and the other of red gold. There are no signs of welding. The body proper is undoubtedly a casting and on the back is an eye that served as a hook, also a part of the body and evidently made at the same casting. The interesting ornament is now awaiting transportation to England, but Dr. Raymond will make every effort to retain it in the United States.

**FRAUDULENT ARROW-HEADS**.—Mr. Kunz said that among some hundreds of arrow-points sent from near Statesville, N. C., he noticed some that had the appearance of having been re-chipped, or, in other words, repaired and improved by some ingenious native, who, when he had an arrow-point that was broken or out of proportion, very skillfully re-chipped it so as to make a more perfect point or side, or a new barb. He then covered it with mud which, when dry, was rubbed lightly off, leaving the newly made surface so coated that the chipping was scarcely perceptible. A little washing removed this, however, and exposed the deception. See cut.

**ABORIGINAL POTTERY OF THE MIDDLE STATES**.—An article by Francis Jordan, Jr., read before the American Philosophical Society, March 2, 1888, speaks of the scarcity of whole vessels of pottery in the Eastern and Middle Atlantic States, not exceeding twenty-five in all, three or four specimens only having been found in New England. The most complete collection of whole pieces being in the cabinet of the Wyoming Historical and Geological Society, described by the late Harrison Wright. He thinks that the pottery of the Atlantic seaboard is primitive in its character; but that that of



the Mississippi valley will rank with the early productions of the pottery of the Old World. There are marked differences in the design and decoration. The common and most primitive shape being that of the gourd, and



the most advanced being that with rectangular tops, either square or octagon in shape. Bottle-shaped vases are rare in New England; common among the mounds. No imitations of the human form in New England specimens, but many in the Middle States; also imitations of birds and animals. The potter's-wheel seems to have been unknown in America, at least in the eastern part of the continent. We give cuts here of two pottery vessels which were discovered in Michigan and described by Bela Hubbard. The first or larger vessel is of the common type, but the second or smaller vessel is quite novel. It shows that there was a very considerable difference between the culture of the different races who dwelt in Michigan.



## BOOK REVIEWS.

*Palenque, et La Civilization Maya.* By F. A. De La Rochefoucauld. I. Vol., octavo, pp. 192. Illustrated. Paris, 1888. Ernest Laroux.

It ought to require some courage for a person wholly unknown in American studies to come forward with a fluent translation of the Maya hieroglyphics, the inscriptions on the celebrated altar piece of Palenque, etc. But here we have the man to do it. Without any preliminary hemming or hawing, he informs the world that he has solved the enigma, and this, even though possessed of the most rudimentary knowledge of the Maya language.

M. de la Rochefoucauld's system is of the simplest: The Mayas wrote according to the method of "visible speech," now so familiar through Prof. Bell's efforts. The figures of their manuscripts and sculptured stones represent the position of the mouth and vocal organs in pronouncing the vowels and consonants of their language. By observations among Maya-speaking Indians the author convinced himself of this, and soon perfected a complete alphabet, which he found identical with the glyphs at Palenque. Along with these, he asserts that they used the rebus, or what has been called the "Iconomatic" method, in which the portraiture of an object stands for its phonetic equivalent. Equipped with these resources he boldly proceeds to translate in detail the Palenque inscriptions.

Needless to say, he makes queer work of it. If all other students of the Maya-writing have agreed at least on the signs for the numerals, this latest investigator throws this with every other alleged explanation overboard. A simple Nahuatl name becomes for him a long Maya sentence; as *Culhuacan*, which he translates "the distant murmur of lofty wisdom arrives with her"! His notes on the "triangle of inscriptions," on "the days of the Maya month," on "the translation of the first line of the Dresden Codex," surpass in wild vagaries the most astounding reveries of the Abbe Brasseur de Bourbourg.

How unfortunate it is that works of this kind continue to be published and even accepted by some as the result of serious study of the subject! It is discouraging to find that archæology is still in such an infantile condition as to allow the possibility of such groundless imagining to be placed on the catalogue of a publisher of scientific books.

D. G. B.

*Arte de La Lengua Maya, por.* Fr. Gabriel de San Buenaventura, Mexico, 1684. Reprint, Mexico, 1888.

This extremely rare *Arte* has especial value as representing the grammatical structure of the Maya as it was in the first century after the conquest, and its republication by Senor Icazbalceta is highly praiseworthy. It is in *fac simile* and very neatly done.

The Maya has since suffered great alterations by the efforts of Ruz and other missionaries, who essayed to bring it into accord with the Latin Grammar. Buenaventura, an educated Frenchman, learned it and analyzed

it before the tongue was thus maltreated. He also composed a large dictionary, which has been lost. The students of the Maya will be wise to prefer his opinion on any grammatical question, when it differs from that of Beltran and the later writers on the language. D. G. B.

*Qabbalah. The Philosophical Writings of Solomon Ben Yehudah Ibn Gebirol, or Avicbron, and Their Connection with the Hebrew Qabbalah and Sepher Ha-Zohar, etc.* By Isaac Myer, LL.B., etc.; I. vol., 8vo., pp. 497. Illustrated. Published by the author. Philadelphia, 1888.

The Cabala—for in spite of the author's arguments we shall employ the orthography which long use has sanctioned for the English language—is a body of Hebrew writings which first came to the knowledge of the learned toward the close of the thirteenth century. They were composed in a designedly obscure style and in an impure dialect. They treated ostensibly of the mystical interpretation of the Pentateuch, an interpretation alleged to have been handed down orally from the remotest ages of Israelitic culture, and in writing from the second century of the Christian era; but, in fact, they go much beyond this, and constitute a compendium of speculative philosophy and practical ethics clothed in simile and symbol, parable and allegory.

These reveries have many points of contact with the Neo-Platonism of Plotinus and the theosophy of the Alexandrian Jews; and consequently when this Neo-Platonism became popular in the sixteenth century, deep interest was awakened in the Cabalistic writings. More than one brilliant genius, like Pico of Mirandola, fell a victim to their labyrinthine subtleties, wasting high intellectual gifts in threading these aimless mazes.

In the present age we approach the Cabala in a different spirit from the sixteenth century students. We turn to it merely as an exposition of one epoch of metaphysical speculation, as an illustration of one phase of the human mind struggling with the great secret of the universe, not by any means expecting to find in its dark pages that great secret itself.

The chief criticism we have to make of the author of the work before us is that in some passages, and perhaps in the spirit of his whole laborious investigation, he really seems to believe that this secret does lie somewhere in the mystic philosophemes he explains; but perhaps it is merely the enthusiasm of the earnest student which imparts this tone to his words.

Certainly he has exploited his mine most conscientiously. He defends the Zohar, which is one of the principal Cabalistic books, against the charge of being a forgery; and if he fails to prove this, we think he does show that at least it was based on other older documents and ancient oral Jewish tradition. Mr. Myer then enters into many interesting expositions of the relation of this mystical philosophy to portions of the New Testament, showing quite plausibly that many sayings of Christ and expressions of the apostles bear reference to, and can only be understood by, this esoteric Hebraic theosophy. The account of the creation (Gen. I.) as explained by the Cabalistic teachers is a striking example of their method, and the author devotes a chapter to it. The notion of man as the microcosm, a favorite idea of the Cabalists, is developed at length. The connections of the doctrines of the Zohar and its exponents with those of the Neo-Platonists, the Gnostics, the Assyrians and Babylonians, the Chinese, etc., are set forth

with extensive erudition. Indeed, no one, even if unacquainted with the subject, can examine the volume without being impressed with the wide reading of the author, and his determination to avail himself of all the light which generations of scholars have thrown upon this obscure branch of learning.

D. G. B.

*Anales del Museo Michoacano.* Redactor. Dr. Nicholas Leon. Morelia, Mexico, 1887-8.

Gur worthy colleague, Dr. Nicholas Leon, continues with unabated zeal his studies into the ethnology of Michoacan, the home of the ancient Tarascas. This people, at the time of the contest with Cortes, submitted themselves peacefully to the Spanish yoke, but felt its weight none the less heavily. They were quite well up in culture, the equals apparently of the Aztecs. Their language is very different from the Nahuatl, being peculiarly rich in vowel sounds and long, harmonious words. Very little attention has been paid them by archaeologists, and hence the efforts of Dr. Leon to collect and preserve their existing remains, to describe the ruins of their edifices and to republish the scant and scarce works upon their language, merit the recognition and thanks of all students. This he sets about to do in the periodical publication named at the head of this notice, and we bespeak for it the attention and support of those interested in Mexican ethnology. The doctor may be addressed Morelia, State of Michoacan, Mexico.

*Meurs et Monuments des Peuples Préhistoriques.* Par le Marquis de Nadaillac. Illustrated, 8vo., pp. 312. G. Masson, Paris, 1888.

It is astonishing, when we come to look at in detail, what an amount of real knowledge we are acquiring about the ages before history began. This is admirably illustrated in the handsome volume us, by the well-known author of *L'Amerique Préhistorique*. No one is better qualified to treat the many debated questions relating to prehistoric times with wider knowledge and a more judicial mind.

After a preliminary chapter on the extent and duration of the stone age, he sets forth to depict the condition of man during that time as illustrated by his remains. In this survey, the reader is brought into acquaintance with the food and clothing of those ancient peoples, their arms and utensils, their ornaments, arts and habitations. With regard to the last mentioned, special attention is given to the cave-dwellings, the pile-supported villages of Switzerland, the shell heaps, and the megalithic monuments. Their fortified towns, as Hissarlick and Santorin, are described, the ancient highways of commerce are mapped out, and finally the methods of interment and sepultures of these pristine fathers of the race are discussed.

The volume is abundantly illustrated and attractively written. What is more important, it's statements can be relied upon as trustworthy reports of the latest investigations, as it's author ranks second to none as an authority on the topics treated of by his pen.

*First Contributions to the study of Folk-lore of Philadelphia and its Vicinity.* By Henry Phillips, Jr. Read before the American Philosophical Society, March 16, 1888.

*Folk-lore of the Germans.* By the same.

The establishment of *The Folk-lore Journal* has already resulted in the de-

velopment of considerable literature in the line of local folk-lore and superstitions. Pennsylvania seems to be the home of a considerable number of these traditionary tales and notions. The customs which prevail among the German farmers are based on superstitions which have been handed down, some of them transmitted from the old country.

*II. Adventures of Pioneer Children; or, Life in the Wilderness.* E. Fenwick Colerick. Price \$1.00.

This interesting little book brings before us scenes which were common at any early day in Ohio. Stories are told of adventures with wolves, with Indians, with snakes, bears, etc. The book is illustrated by a number of full-page wood-cuts. Among them is a picture of Boone's block-house at Boonesborough and the burning of Colonel Crawford; both of which bring to mind important historical events. Like all of Robert Clarke's publications the book is gotten up in excellent style.

*III. Forman's Journey Down the Ohio and Mississippi in 1789-90.* By Lyman C. Draper, LL.D., of Wisconsin.

The journal of a pioneer excursion down the Ohio river in 1789-90 is given in this little volume. There is a mention of various points of interest; Pittsburg, Marietta, Ft. Washington, Judge Symme's settlement, Louisville, Fort Massac, New Madrid, Natchez.

The author delights in morsels like this. He has a large amount of manuscript in his fire-proof library building, and it would be well if other monographs were prepared by him.

*History of Civilization. The Ancient World or Dawn of History,* By E. A. Cincinnati: Central Publishing House, 1888.

We have already reviewed the first volume of this series. It bears the title of "The Prehistoric World." This, the second volume, treats of the following topics: The Races of Men, Ancient Society, Primitive Culture, Primitive Religion, Yellow Races, Ancient Egypt, the Semites, and the Semites continued. It is a subscription book, but is nicely gotten up, and is written in a very scholarly and interesting style. The author has spent a great deal of time in its preparation, and has done honest and good work. The plan is to write four books on the history of civilization, though it is probable that the first two will be the most valuable of the series. They will be at least regarded so by archæologists, as they treat of the prehistoric and early historic subjects. It is well that this compendium of all that has been written on these different topics has been prepared and published, for it will save archæologists a great deal of time and expense. The author has had access to the books in the public library at Cincinnati, and has a faculty of skimming the cream from them. Of course the specialists in different departments will prefer to go to first sources, and yet he will find many things suggestive in this work. We are glad to commend it to our readers as a valuable contribution to proto-historic archæology.

#### BOOKS RECEIVED.

*Geology as a Means of Culture; Geology and the Bible; Speculative Consequences of Evolution,* by Alexander Winchell, LL.D.

*Cell Life,* by Julius Pohlman, M. D.

*Glonoin, a Heart Remedy,* by E. M. Hale, M. D.

*Proceedings of the American Antiquarian Society,* April 25, 1888.

*Transactions of the New York Academy of Science,* 1887-1888.

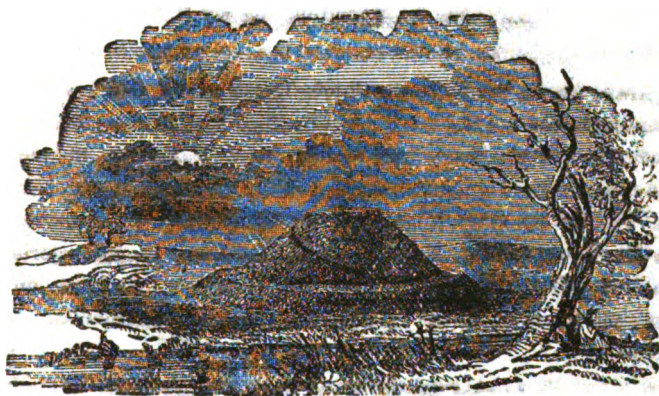
0

The

# American Antiquarian

and

## Oriental Journal.



BI-MONTHLY.

Terms, \$4.00 per Annum.

Address S. D. PEET, Mendon, Illinois.

OR 175 WABASH AVENUE, CHICAGO, ILL.

[Entered at the Postoffice, at Mendon, Ill., as second-class matter.]

WILL, JONES & CO. PRINTERS, CHICAGO.

# TABLE OF CONTENTS.

	Page
GREAT MOUND NEAR DETROIT, . . . . .	Frontispiece
PREHISTORIC ARCHEOLOGY IN WESTERN EUROPE. Second Paper. Illustrated. By Thomas Wilson, Washington, D. C., . . . . .	3
PROOFS OF ABORIGINAL CULTURE. By H. H. Bancroft, San Francisco, . . . . .	21
PUGET SOUND INDIANS. Fifth Paper. By Rev. M. Eells, Shokomish, Washington Territory, . . . . .	26
ARCHEOLOGY OF MICHIGAN. Illustrated. By Stephen D. Peet, . . . . .	36
TRIBAL BOUNDARIES OF THE ESKIMOS. By FRANK BOSS, N. Y. City, . . . . .	40
CORRESPONDENCE—Novel Method of Preserving Peace, by Jas. Deana, Victoria, B. C.; Relics from a Cave in Ohio, by J. R. Nissley, Ada; Two-barred French Cross, by Prof. James D. Butler; A Stone Charm in the Mouth of a Mound-builder, by E. P. Vining, . . . . .	42
EDITORIAL—Paleolithics, Mound-builders, the Age and Date of each, . . . . .	46
LITERARY NOTES, by the Editor-in-Chief—The Mexican Bacchus, The Toltecs, Charnay's New Book, Chambers in Mounds; Colossal Heads, Death's Heads and Smiling Faces, Composite Photography, Serpent and Siva Worship, A Chinese Symbol at Copan, The Figures Seen by Marquette, The Sphinx in America, The House of the Echo, Wheeled Carriages in Prehistoric Times, Tattooing, The Natives of Hispaniola, Lectures on Palestine, Four Races in Yucatan, The Serpent Symbol in Sweden, . . . . .	51
BOOK REVIEWS—Sixth Annual Report of the United States Geological Survey, Proceedings of the New Jersey Historical Society, Conewago, Ancient Nahuatl Poetry, Totemism, Ancient Cities of the New World, Records of Ancient Cities in the Mississippi Valley, Bibliography of the Eskimo Languages, The Science of Thought, Conventionalism in Ancient American Art, . . . . .	60

**A** LL made of handsome material and of the finest workmanship, rare. All of good workmanship, but slightly defaced. All make good cabinet specimens.

No. 1.	Level base arrow points, price.....	8c.	to 30c
No. 2.	Round " " " " .....	7c.	to 30c
No. 3.	Indented base arrow points, price.....	12c.	to 50c
No. 4.	Stemmed " " " " .....	4c.	to 15c
No. 5.	Indented stem arrow points, " " .....	8c.	to 30c
No. 6.	Notched base " " " " .....	4c.	to 20c
No. 7.	Leaf shape, thin cutting edge all around the circumference, price.....	10c.	to 50c
No. 8.	Barbed base arrow point, price.....	10c.	to 50c
No. 9.	Rotary " " " " .....	8c.	to 40c
No. 10.	Beveled " " " " .....	10c.	to \$1
No. 11.	Serrated edge " " " " .....	10c.	to \$1

**J. R. NISSLEY, Ada, Hardin Co., O.**

**G. K. GREENE**

**X-1-St** - *Mention the Antiquarian.*

**DEALER IN**

**~~43~~ Horns of every description bought and sold.**

**Sanborn, Dakota.**

**X-1-10**      *Mention the Antiquarian.*

**for the Family, the School, or the Professional or Public Library, is a copy of the latest issue of Webster's Unabridged.**



**A Dictionary**  
of 118,000 Words, 3000 Engravings,  
**A Gazetteer of the World**  
locating and describing 25,000 Places,  
**A Biographical Dictionary**  
of nearly 10,000 Noted Persons,  
**All in One Book.**

8000 more Words and nearly 2000 more Illustrations than any other American Dictionary.  
Sold by all Booksellers. Pamphlet free.  
G. & C. MERRIAM & CO., Pub'rs, Springfield, Mass.

**NOTES AND QUERIES** relating to the past history of Wales and the Border Counties, reprinted half yearly with additions and corrections from the **Cardiff WEEKLY MAIL**.

**NOW READY, PART 1.**

Subscriptions 5s per annum, post free.

**Subscribers names received by**

**The Editor, "Cymru Fydd,"**

**WEEKLY MAIL,**  
**Cardiff, Wales.**



# *Horstford's*

## Acid Phosphate,

(LIQUID)

A preparation of the phosphates that is readily assimilated by the system.

**Especially recommended for Dyspepsia, Mental and Physical Exhaustion, Indigestion, Headache, Nervousness, Wakefulness, Impaired Vitality, Etc.**

Prescribed and endorsed by Physicians of all schools.

It combines well with such stimulants as are necessary to take.

**It makes a delicious drink with water and sugar only.**

For sale by all druggists. Pamphlet free.

Rumford Chemical Works, Providence, R. I.

---

**BEWARE OF IMITATIONS.**

Press of VOLK, JONES & McMEIN, Quincy.

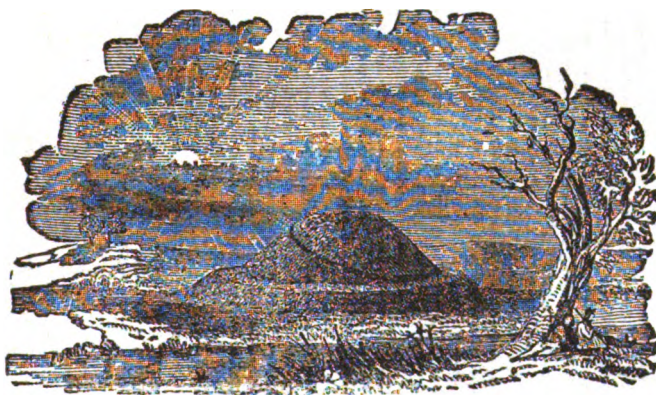
VOL. X.

SEPTEMBER, 1888.

No. 5.

o /

The  
American Antiquarian  
and  
Oriental Journal.



BI-MONTHLY.

Terms, \$4.00 per Annum.

Address S. D. PEET, Mendon, Illinois.

OR 175 WABASH AVENUE, CHICAGO, ILL.

[Entered at the Postoffice, at Mendon, Ill., as second-class matter.]





